Change Log 6-0

Title

- Title of document changed to reflect nature of document and to coexist with new Spec and Delivery Overview 6-0 document

Section 2, Source Material Requirements, General Overview

- Added: No 3:2 Pulldown flags allowed.
- Changed: name of portal to The Netflix Backlot

Section 4.2.2, Closed Captioning and SDH as Separate File

- Added: Please do not convert “roll up” captions to “pop on.”

Section 5, File Naming Conventions

- Deliveries via The Netflix Backlot do not need to adhere to these naming conventions.

Section 6, Metadata

- Added: Technical or source metadata must be delivered via The Netflix Backlot as XML. Descriptive metadata must be delivered via an excel template.
  Here is the full documentation of the XML specification, including the XML Schema Definition, which describes the required and optional metadata elements need for delivery: [ http://goo.gl/sJTLQ ]

Section 6.2, Primary and Secondary Assets Metadata

- Removed this section as it is now redundant

Section 7, Delivery via Aspera

- Added: You must have a static IP or range of IPs.

Section 8, Content Management Portal

- Changed name to The Netflix Backlot

Section 10.2 Approved MPEG-2 mezzanine creation tools

- Added: Most commercial grade encoding solutions now offer Netflix-approved profiles. Please check http://digitalbacklot.netflix.com/ for profiles and more info, including how-to videos.
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1 Objective

The Netflix® streaming service offers an outstanding, high-quality viewing experience for our customers. This level of quality requires Netflix to work with source files that match the original frame rate and aspect ratio as it was originally shot. If Distributor does not have the source Netflix requests, Netflix will work closely with Distributor to see if there are acceptable alternatives. Netflix may be referred to as “Netflix” or “our” and Distributor may be referred to as “you” and “your” in this schedule.

For each Title, all Source Material elements set forth in this schedule shall work in conjunction (conform) with one another as a properly functioning single asset. Source Material must be compliant with the specifications below detailed in this document.

2 Source Material Requirements

General Overview

All files must not contain bars and tones, VITC (vit-see) time code, advertisements, slates, ratings cards, FBI warning cards, placards, overlay branding or website link callouts before, during and/or after the program. All files must consist of the feature program with one (1) second of black at the head and tail of the program (one frame to one [1] second of black is acceptable if providing ProRes files). If Source Material has commercial blacks, each commercial black segment must be trimmed down to two (2) seconds or less in the final mezzanine delivery. There are no exceptions to these requirements.

- Our preference is to receive a non-subtitled version of the content. Netflix defines “non-subtitled” as the presence of main titles, end credits, narrative text, location call-outs, and other supportive/creative text, but no burned-in subtitled dialogue, regardless of the language in the primary video.
- 2D Sources: Netflix accepts MPEG-2 Transport Stream files or iTunes® packaged ProRes files.
- MPEG primary video files must be delivered as MPEG-2 Transport Stream files.
- All ProRes 422 HQ files must meet the iTunes package specifications.
- Titles cannot be delivered as multi-part files, e.g., if a title is 90 minutes in duration, a single file with a 90-minute duration must be delivered. Two (2) files with 45-minute durations will not be accepted.
- Netflix requires files to be delivered in their native frame rates. Netflix defines this to mean what the material was originally shot in or edited with regards to frame rate. If it was originally a film, Netflix requires the native film frame rate (either 23.976p or 25p). This is often different from the frame rate that is used for tape, archival storage, and delivery to broadcasters (typically 29.97i df, or 25i). No 3:2 Pulldown flags allowed.
- Netflix requires files to be delivered in their original aspect ratio. Netflix will not accept a 4x3 version when a 16x9 version was originally created.
- Source material must be uncensored.
- Upon notice from Netflix (email sufficient), Distributor shall deliver Source Material via Netflix’s Content Partner Portal (The Netflix Backlot) starting on a mutually agreed upon date. The Netflix Backlot will be accessible via GUI (graphical user interface) and/or through API (application programming interface) integration with the vendor’s Asset Management System.
### 2.1 Primary Digital Assets (2D)

<table>
<thead>
<tr>
<th>File Type</th>
<th>(in order of preference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High Definition – MPEG-2 Transport Stream (80 Mbps)</td>
<td></td>
</tr>
<tr>
<td>2. High Definition – ProRes 422 HQ (iTunes package format (~220 Mbps))</td>
<td></td>
</tr>
<tr>
<td>3. Standard Definition – MPEG-2 Transport Stream (50 Mbps)</td>
<td></td>
</tr>
<tr>
<td>4. Standard Definition – ProRes 422 HQ (iTunes Package format (~50 Mbps))</td>
<td></td>
</tr>
</tbody>
</table>

**2.1.1 Digital Video Prerequisites (2D)**

Netflix requires 16x9 (1:1 PAR for HD, 32:27 PAR for SD) video if shot in 16x9 (1:1 PAR for HD, 32:27 PAR for SD). Netflix will only accept 4x3 content (8:9 PAR) if the content originated in 4x3. 29.97i or 25i sources will only be accepted if feature was originally shot in 29.97i or 25i. If content was shot as PAL, Netflix requires PAL sources. Source material shall be delivered in the highest quality and resolution including, but without limitation to, high definition.

**2.2 Primary Mezzanine Audio Prerequisites**

Titles with surround sound require 5.1 audio. When 5.1 audio is supplied, preferably an additional 2-channel Left Total + Right Total mix (2-channel stereo mix) will be supplied on the same audio track as the surround. Netflix requires a single audio track that contains all 8 channels (6 channels for the 5.1, and 2 channels for the LT/RT mix). Netflix does not accept multi-track audio files.

If conformed 5.1 audio was never created, stereo audio will be accepted (mono audio is acceptable if the program is an old black-and-white movie, documentary, etc., as long as the original source was mono). Do not create a 2.0 track by simply mixing down the 5.1 track.

*Within the MPEG-TS or MOV container, audio must conform (sync) to video and audio duration must match video duration within 1 second.*

For MPG files, Netflix uses standard channel assignments as shown below:

1. **5.1 audio + 2.0 audio channel assignments**
   - a. Channel 1 – Left
   - b. Channel 2 – Right
   - c. Channel 3 – Center
   - d. Channel 4 – LFE
   - e. Channel 5 – Left Surround
   - f. Channel 6 – Right Surround
   - g. Channel 7 – Left Total
   - h. Channel 8 – Right Total
2. **Stereo Comp audio only**  
   a. Channel 1 – Left Total  
   b. Channel 2 – Right Total  

3. **Mono Comp audio** (usually old black-and-white movies, etc.)  
   a. Channel 1 – Mono Comp  
   b. Channel 2 – Mono Comp

ProRes 422 HQ audio configuration must adhere to iTunes Package Asset Specifications. Please pay special attention to the audio track / channel assignments defined in the iTunes Package Asset Specifications.
3  Primary Digital Asset Specifications

3.1  MPEG-2 Specifications

3.1.1  High Definition – MPEG-2 (80 Mbps)
1. Video Codec: MPEG-2
2. Profile ID: High Profile
3. Level ID: High Level
4. Video Bitrate: 80 megabits (Constant Bit-Rate)
5. Stream Type: Transport Stream
6. Resolution:
   a. 1920x1080
   b. 1280x720
7. Audio Codec:
   a. Multi-Channel Assignment
      i. Acceptable audio codecs
         1. Multi-channel PCM – 16 bit, 48 kHz (Little Endian),
         2. Multi-channel AES3 LPCM (302m) – 16 bit, 48 kHz,
      ii. Channel Mapping
         1. Channel 1 – Left
         2. Channel 2 – Right
         3. Channel 3 – Center
         4. Channel 4 – LFE
         5. Channel 5 – Left Surround
         6. Channel 6 – Right Surround
         7. Channel 7 – Left Total
         8. Channel 8 – Right Total
   b. Stereo Assignment (if multi-channel does not exist)
      i. Acceptable stereo audio codecs
         1. PCM – 16 bit, 48 kHz (Little Endian)
         2. Stereo AES3 LPCM (302m) – 16 bit, 48 kHz
         3. DVD LPCM – 16 bit, 48 kHz
         4. MPEG Layer 1 – 48 kHz, 448 kbps
      ii. Channel Mapping
         1. Channel 1 – Left Total
         2. Channel 2 – Right Total
8. Frame rate: (frame rate must match native frame rate, as shot or edited)
   a. 23.976 progressive
   b. 25.00 progressive
   c. 25.00 interlaced
   d. 29.97 progressive
   e. 29.97 interlaced
   f. 59.94 progressive
   g. 50 progressive
9. Aspect Ratio:
   a. 1:1 square pixels
10. Intra DC Precision: 10-bit
11. Chroma Format: 4:2:2
12. **GOP Structure**: I-frame ONLY, Closed GOP, per frame sequence header
13. **Closed Captioning**: As defined in section 4.2 below

### 3.1.2 Standard Definition – MPEG-2 (50 Mbps)

1. **Video Codec**: MPEG-2
2. **Profile ID**: High Profile
3. **Level ID**: High Level
4. **Video Bitrate**: 50 megabits (CBR)
5. **Stream Type**: Transport Stream
6. **Resolution**:
   a. NTSC or Film: 720x480
   b. PAL: 720x576
7. **Audio Codec**:
   a. **Multi-Channel Assignment**
      i. Acceptable audio codecs
         1. Multi-channel PCM – 16 bit, 48 kHz (Little Endian)
         2. Multi-channel AES3 LPCM (302m) – 16 bit, 48 kHz
      ii. **Channel Mapping**
         1. Channel 1 – Left
         2. Channel 2 – Right
         3. Channel 3 – Center
         4. Channel 4 – LFE
         5. Channel 5 – Left Surround
         6. Channel 6 – Right Surround
         7. Channel 7 – Left Total
         8. Channel 8 – Right Total
   b. **Stereo Assignment** (if multi-channel does not exist)
      i. Acceptable stereo audio codecs
         1. PCM – 16 bit, 48 kHz (Little Endian)
         2. Stereo AES3 LPCM (302m) – 16 bit, 48 kHz
         3. DVD LPCM – 16 bit, 48 kHz
         4. MPEG Layer 1 – 48 kHz, 448 kbps
      ii. **Channel Mapping**
         1. Channel 1 – Left Total
         2. Channel 2 – Right Total
8. **Frame rate**: (frame rate must match native frame rate, as shot or edited)
   a. 23.976 progressive
   b. 25.00 progressive
   c. 25.00 interlaced
   d. 29.97 progressive
   e. 29.97 interlaced
9. **Aspect Ratio**:
   a. 16x9 if anamorphic
   b. 4x3 if standard full frame
10. **Intra DC Precision**: 10-bit
11. **Chroma Format**: 4:2:2
12. **GOP Structure**: I-frame ONLY, Closed GOP, per frame sequence header
13. **Closed Captioning**: As defined in section 4.2 below
### 3.2 ProRes 422 HQ Specifications

All ProRes 422 HQ files must meet the specifications of the iTunes Package Asset Specification, available from Apple, Inc.

- All ProRes files must have the .mov file extension.
- **Please pay careful attention to the “Normal Size” and “Display Size” in the video track properties accessible in QuickTime Pro. Please ensure the aspect ratio you are intending is correctly displaying in QuickTime. The iTunes Package Asset Specifications clearly defines the acceptable display sizes for content.**
- **Please pay careful attention to the audio track / channel assignments defined in the iTunes Package Asset Specifications. All channels must be tagged in accordance with the iTunes spec.**

### 4 Secondary Asset Specifications

#### 4.1 Subtitle as a Separate File

Subtitles must encompass the spoken dialogue intended to be understood that differs in language from the subtitle file. Subtitles must also translate any narrative burned-in text that is in a different language from the subtitle file.

For example, if a film is to be streamed in Germany, the German subtitle file would contain translation for all the non-German dialogue spoken.

- Subtitles must conform, within a half second, to the Primary Video Mezzanine that is delivered or to the Netflix-provided Proxy File. Raster image-based subtitles will not be accepted.
- Subtitle files must not be censored or contain advertisements, placards, overlay branding, website link callouts or company credits.
- All subtitle files need to start at hour 00. Netflix does not accept the subtitle timestamps starting at hour 01 or 10, which is common on tape.
- Include positional data in the subtitle file if the subtitles would otherwise obscure burned-in text.

Preferred formats (due to support of positional data):

- STL (EBU) - preferred
- DFXP (valid extensions are .dfxp and .xml)

Alternate Acceptable formats to be used only when positional data is not needed:

- SRT
- SMI

For SMI and SRT, the files default character set is Windows-1252. If either UTF-8, UTF16LE, or UTF-16BE is used, the file **MUST start with the appropriate byte order mark (BOM)**. One way to set the BOM is to open in Notepad, and use <File><Save-as>, and selecting either "ANSI" (Windows-1252), "UTF-8", or "Unicode" (UTF-16 little endian) or “Unicode big endian” (UTF-16 big endian) from the “Encoding” combo box. For information on BOM, see: [http://en.wikipedia.org/wiki/Byte_order_mark](http://en.wikipedia.org/wiki/Byte_order_mark).

If your text-based subtitle format is not listed above, please contact Netflix to discuss other options.
All 29.97 fps content shall have subtitles that conform to 29.97 drop-frame time code. It does not matter if the source tape is non-drop frame or drop frame; Netflix always needs drop-frame time code for 29.97 content.

All 23.976 fps content shall have subtitles that conform to SMPTE 24 time code. Netflix does not accept subtitles timed to 23.976 video playback rate.

All 25 fps content shall have subtitles that conform to PAL 25 time code.

The way to do this is to create a proxy with burned-in time code that is either 29.97 drop frame or SMPTE 24, starting at hour 00. This can be done in Final Cut Pro® or Avid® quite easily. Use that proxy and align the subtitles with the burned-in time code. It may be helpful if you play back 23.976 video at 24.00 fps.

### 4.1.1 Forced Narrative Subtitles

Our preference is to receive a non-subtitled version of the content. To support the non-subtitled source, Netflix needs Forced Narrative subtitles delivered as ancillary files.

- Examples of text to be included in Forced Narrative subtitles:
  - Translation where an alternate language is spoken
  - Transcription of inaudible dialogue if it would have been included in broadcast or theatrical presentation
    - *For example: An English-language film has 5 minutes of Japanese dialogue and is to be streamed to U.S. customers. The desired video would not include burned-in subtitles for the Japanese sections. A Forced Narrative subtitle file would be supplied that contains the Japanese dialogue translated into English. The Forced Narrative file would not have the original English dialogue transcribed.*

The technical format of Forced Narrative subtitles must follow the same rules as standard subtitles. Please refer to the File-Naming Conventions in section 5.

### 4.2 Accessibility Files (CC and SDH)

CC – Closed Captions (English language only)
SDH – Subtitles for the Deaf and Hard of Hearing

CC and SDH must encompass the spoken dialogue intended to be understood in the content. If the content has multiple spoken languages, they all must be translated and present in the CC or SDH file.

#### 4.2.1 Closed Captions as Embedded Data

The primary closed caption data may be carried within the video stream. For MPEG-2 video, the captions must be carried in the picture user data, as defined in “ATSC Standard: Digital Television Standard (A/53), Revision D, section 5.2” or the “SCTE 20 specification.”

#### 4.2.2 Closed Captioning and SDH as Separate File

This is the preferred method of delivery. If closed captioning is delivered as a separate file, or if you are delivering SDH, it must be submitted in one of the acceptable formats listed below.

- Raster image-based closed captioning/SDH will not be accepted.
CC/SDH files must conform, within a half second, to the Primary Video Mezzanine that is delivered or to the Netflix-provided Proxy File.

CC/SDH files must not be censored or contain advertisements, placards, overlay branding, website link callouts or company credits.

All CC/SDH files need to start at hour 00. Netflix does not accept the CC/SDH timestamps to start at hour 01, which is common on the tape.

Include positional data in the CC/SDH file if a caption or subtitle would otherwise obscure burned-in text.

Our preference is to receive captions in the “pop on” style.

Please do not convert “roll up” captions to “pop on.”

Netflix needs all 29.97 fps content to have CC/SDH files that conform to 29.97 drop-frame time code. It does not matter if the source tape is non-drop frame or drop frame, Netflix always needs drop-frame time code for 29.97 content.

Netflix needs all 23.976 fps content to have CC/SDH files that conform to SMPTE 24 time code. Netflix does not accept files timed to 23.976 video playback rate.

All 25 fps content shall have CC/SDH files that conform to PAL 25 time code.

Acceptable Closed Caption Files:
- SCC
- DFXP (valid extensions are .dfxp and .xml)

Acceptable SDH Files:
- STL (EBU) – preferred
- DFXP (valid extensions are .dfxp and .xml)
- SMI (acceptable if there is no need for positional data)

For SMI and SRT, the files default character set is Windows-1252. If either UTF-8, UTF16LE, or UTF-16BE is used, the file MUST start with the appropriate byte order mark (BOM). One way to set the BOM is to open in Notepad, and use <File><Save-as>, and selecting either “ANSI” (Windows-1252), “UTF-8”, or “Unicode” (UTF-16 little endian) or “Unicode big endian” (UTF-16 big endian) from the “Encoding” combo box. For information on BOM, see: http://en.wikipedia.org/wiki/Byte_order_mark.

If your closed caption / SDH format is not listed above, please contact Netflix to discuss other options.

4.3 Alternate Language Audio as a Separate File

If alternate language audio tracks are required under the Agreement, they shall be conformed to the primary digital audio/video asset delivered. Acceptable formats for alternate-language audio tracks are stereo or multi-channel AAC (in an MP4 wrapper) or AES3 LPCM audio (in a MPEG-2 Transport Stream, .mpg), or iTunes QuickTime format as described in iTunes Package Asset Specifications. Either format shall be encoded at the highest possible bitrate to maintain fidelity. Deliver both a 5.1 file and a 2.0 file separately if both formats were originally mastered. Do not create a 2.0 track by simply mixing down the 5.1 track. If no 2.0 track exists, only deliver the 5.1 track. If no
5.1 track exists, only deliver the 2.0 track. Please follow the file-naming convention described in section 5.2 Alternate Language Audio File-Naming.

Please note: Lectern-style dubbing (single narrator speaking the role of each character) is not acceptable.

### 4.3.1 Acceptable Alternate Language Audio Formats (non-QuickTime)

1. **Audio Codec and Container:**
   a. AES3 LPCM audio in an MPEG-2 Transport Stream (.mpg)
   b. AAC (Low Complexity) in an MP4 container (.mp4)
      i. Must be a generic MP4 container (not QuickTime)
2. **Bitrate:** Highest bitrate possible (CBR)
3. **Sample rate:** 44.1 kHz or 48 kHz
4. **5.1 Audio Channel Mapping for AES3 LPCM in MPEG-2 Transport Stream (.mpg)**
   a. Channel 1 – Left
   b. Channel 2 – Right
   c. Channel 3 – Center
   d. Channel 4 – LFE
   e. Channel 5 – Left Surround
   f. Channel 6 – Right Surround
5. **5.1 Audio Channel Mapping for AAC (Low Complexity) in an MP4 container (.mp4)**
   **Note:** Please use standard AAC channel mapping as shown below. Do not remap channels so that the decode follows the below channel mapping. The channel mapping below is for the encoded AAC file. Upon decode, AAC files get decoded as L,R,C,Lfe,Ls, Rs. To verify please play back the AAC file in a multi-channel system and all channels shall map properly on decode. A sample filename for an AAC MP4 audio file is: 1937512_2997p_C_L_R_Ls_Rs_Lfe_es-ES_audio.mp4
   a. Channel 1 – Center
   b. Channel 2 – Left
   c. Channel 3 – Right
   d. Channel 4 – Left Surround
   e. Channel 5 – Right Surround
   f. Channel 6 – LFE
6. **2.0 Audio Channel Mapping for both AES3 LPCM (.mpg) or AAC (.mp4):**
   a. Channel 1 – Left Total
   b. Channel 2 – Right Total

### 4.3.2 Acceptable Alternate Language Audio Formats (QuickTime)

iTunes QuickTime format as described in iTunes Package Asset Specifications is acceptable. Please pay special attention to the audio track / channel assignments defined in the iTunes Package Asset Specifications. All channels must be tagged in accordance with the iTunes spec.
5 File-Naming Conventions

Deliveries via The Netflix Backlot do not need to adhere to these naming conventions.

5.1 Primary Video Asset File-Naming

The file-naming convention for the Primary Video file is as follows:

If video does NOT have Burned-In subtitles:

**MPEG-2**

[PackageID]_[ framerate ]_[ aspectratio ]_[ height ]_[ channel1 ]..._[ channelX ]_[ langCode ]_primary.mpg

**ProRes 422 HQ**

[PackageID]_[ framerate ]_[ aspectratio ]_[ height ]_[ channel1 ]..._[ channelX ]_[ langCode ]_primary.mov

If video has Burned-In subtitles:

**MPEG-2**

[PackageID]_[ framerate ]_[ aspectratio ]_[ height ]_BURN[ langCode ]_[ channel1 ]..._[ channelX ]_[ langCode ]_primary.mpg

**ProRes 422 HQ**

[PackageID]_[ framerate ]_[ aspectratio ]_[ height ]_BURN[ langCode ]_[ channel1 ]..._[ channelX ]_[ langCode ]_primary.mov

Definitions:

- **[PackageID]** – This is the package identifier and it provides a way of identifying a group of conformed assets. A unique ID will be provided by Netflix for each set of conformed assets per title.
- **[ aspectratio ]** – Aspect ratio of the video content. Common aspect ratios are, but not limited to:
  - 133 (for full frame 4x3)
  - 166
  - 178 (for full frame 16x9)
  - 185
  - 235
- **[ height ]** – This is the height of the video content.
  Acceptable values for 2D:
  - 480
  - 486
  - 576
  - 720
  - 1080
- **BURN[ langCode ]** – Used to specify the language of the Burned-In dialogue subtitles. Please follow the language codes exactly as defined in Appendix section 10.1 Language Codes. This attribute must be provided when the video content contains Burned-In subtitles. If the video content does not contain Burned-In subtitles, this attribute must be omitted. If the content only has burned in narrative text, locator cards, e.g., FBI Headquarters, do not use the BURN identifier. Burned-In subtitles are not acceptable for 3D mezzanines.
- **[ channelX ]** – Audio channel mapping must be identified as follows:
  - 2 channel .mpg file = _LT_RT_
  - 2 channel QuickTime .mov file = _L_R_
  - 6 channel = _L_R_C_Lfe_Ls_Rs_
8 channel = _L_R_C_Lfe_Ls_Rs_LT_RT_

[langCode] – Used to specify the language of the audio track. Please follow the language codes exactly as defined in Appendix section 10.1 Language Codes.

5.1.1 Example filenames for High-Definition Files (2D)

- Without Burned-In subtitles:
  - English audio language
    - 3214561_23976p_178_1080_L_R_C_Lfe_Ls_Rs_LT_RT_en_primary.mpg
    - 3214561_23976p_178_1080_L_R_C_Lfe_Ls_Rs_LT_RT_en_primary.mov
    - 9688777_25p_178_1080_L_R_en_primary.mov
  - Spanish (Neutral) audio language
    - 2130213_23976p_235_1080_LT_RT_es_primary.mpg

- With Burned-In subtitles:
  - English Burned-In subtitle language with Brazilian Portuguese audio language
    - 9876543_23976p_178_1080_BURNen_L_R_C_Lfe_Ls_Rs_LT_RT_pt-BR_primary.mpg
  - Brazilian Portuguese Burned-In subtitle language with Castilian Spanish audio language
    - 198263_2997p_185_720_BURNpt-BR_LT_RT_es-ES_primary.mpg

5.1.2 Example filenames for Standard-Definition Files (2D)

- Without Burned-In subtitles:
  - French Canadian audio language
    - 135792_23976p_235_480_LT_RT_fr-CA_primary.mpg

- With Burned-In subtitles:
  - English Burned-In subtitle language with Spanish (Neutral) audio language
    - 7345221_25i_133_576_BURNen_LT_RT_es_primary.mpg
5.2 Alternate Language Audio File-Naming

The file-naming convention of the audio file is as follows:

[PackageID]_[framerate]_[channel1]..._[channelX]_[langCode]_audio.[ext]

Definitions:

[PackageID] – This is the package identifier and it provides a way of identifying a group of conformed assets. A unique ID will be provided by Netflix for each set of conformed assets per title.

[framerate] – This is the frame rate of the conformed video asset. Acceptable frame rates are: 2976p, 25i, 25p, 2997i, 2997p, 5994p, 50p.

[channelX] – Audio channel mapping

- 2 channel .mpg or .mp4 file = _LT_RT_
- 2 channel QuickTime .mov file = _L_R_
- 6 channel LPCM = _L_R_C_Lfe_Ls_Rs_
- 6 channel AAC .mp4 = _C_L_R_Ls_Rs_Lfe_
- 8 channel QuickTime .mov = _L_R_C_Lfe_Ls_Rs_LT_RT_

[langCode] – Used to specify the language of the audio track. Please follow the language codes exactly as defined in Appendix section 10.1 Language Codes.

The filename should match the channel mapping of the audio file.

Examples:

124578_23976p_L_R_C_Lfe_Ls_Rs_en_audio.mpg
124578_23976p_LT_RT_fr-CA_audio.mpg
1937512_50p_C_L_R_Ls_Rs_Lfe_es-ES_audio.mp4
124578_2997i_L_R_C_Lfe_Ls_Rs_en_audio.mp4
124578_2997i_L_R_en_audio.mov

5.3 Subtitle & Forced Narrative Subtitle File-Naming

The file-naming convention of the secondary subtitle file is as follows:

Standard Subtitles

[PackageID]_[framerate]_[langCode]_sub.[ext]

Forced Narrative Subtitles

[PackageID]_[framerate]_[langCode]_forcedsub.[ext]

Definitions:

[PackageID] – This is the package identifier and it provides a way of identifying a group of conformed assets. A unique ID will be provided by Netflix for each set of conformed assets per title.


[langCode] – Used to specify the language of the text. Please follow the language codes exactly as defined in Appendix section 10.1 Language Codes.

Examples:

1921345_24_es_sub.smi
1921345_24_en_sub.srt
1236547_2997_fr-CA_sub.dfxp
1236547_2997_pt-BR_forcedsub.srt
5.4 Closed Caption & SDH File-Naming

The file-naming convention of the secondary closed caption or SDH file is as follows:

[PackageName][framerate][langCode]_cc.scc

Definitions:
[PackageName] – This is the package identifier and it provides a way of identifying a group of conformed assets. A unique ID will be provided by Netflix for each set of conformed assets per title.
[langCode] – Used to specify the language of the text. Please follow the language codes exactly as defined in Appendix section 10.1 Language Codes.

Examples:
1313576_24_es_cc.scc
1313576_25_en_cc.scc
1313576_2997_fr-CA_cc_stl
1313576_24_pt-BR_cc.dfxp

5.5 Test File-Naming

If Netflix requests Distributor to deliver test files, a full-length file is preferred in HD and/or SD (as specified by Netflix), along with conformed subtitles, closed captions or audio files if applicable. When delivering test files for review, follow the naming conventions described in section 5, but substitute package ID with “TEST_VENDORNAME.”

Examples:
TEST_YOURCOMPANY_23976p_235_1080_LT_RT_es_primary.mpg
TEST_AudioDubCompany_23976p_LT_RT_fr-CA_audio.mpg
TEST_NICKSCAPTIONHOUSE_24_es_cc.scc
6 Metadata

Technical or source metadata must be delivered via The Netflix Backlot as XML. Movie Content metadata must be delivered via an excel template.

Here is the full documentation of the XML specification, including the XML Schema Definition, which describes the required and optional metadata elements need for delivery: [http://goo.gl/sJTLQ](http://goo.gl/sJTLQ)

6.1 Movie Content Metadata

Movie metadata is required for all content and is to be submitted via the approved Netflix Metadata Excel Template to your Netflix Operations contact.

Distributor shall provide all film/television ratings information that exists for each Title with respect to the licensed Territory and the United States, if any.

All dubbed and/or subtitled content is to be accompanied with the relevant metadata in the original and alternate language to support the source delivered.

7 Delivery via Aspera®

Netflix uses Aspera exclusively for network delivery. Distributor must push content to Netflix via Aspera. Netflix will not pull content. Please discuss this with your Netflix Video On-Boarding Engineer if you have any questions about this requirement.

Please be prepared to provide the following information in order to set up an Aspera account.

- Whether you have your own licensed Aspera client/server or will use the free Aspera Connect® web application.
- Public outbound IP address(es) for which your host(s) will use for transferring files to Netflix via Aspera.
  - You must have a static IP or range of IPs.
- Technical contact (name, e-mail and phone number) of the person responsible for setting up the Aspera connection on your end.

8 Content Partner Portal (The Netflix Backlot)

- Upon notice from Netflix (email sufficient), Distributor shall deliver Source Material via Netflix’s Backlot portal starting on a mutually agreed upon date. The Netflix Backlot will be accessible via GUI (graphical user interface) and in the future, through API (application programming interface) integration with the vendor’s Asset Management System.
9 Artwork

9.1 Feature Film / Television Series Art

In addition to any other art requirements under this Agreement, Distributor shall deliver to Netflix the following art for each Title in compliance with the below requirements: Vertical, Horizontal, Title Card, Stills, Story Art and Character Art (each as defined below). Distributor shall deliver to Netflix all art in the highest quality available to Distributor or its affiliates. Art shall be delivered via Box.com (account will be provided by Netflix). Images provided will be used within the Netflix service (including, without limitation, on all Netflix ready devices, through the website, User Interfaces, applications, blogs, social networking sites and our communications with members and potential members) and in marketing materials promoting the titles’ availability on Netflix.

**All art shall be provided in localized format (i.e., as it is marketed in the Territory) including Title Treatments in each language in which the Title may be exhibited under the Agreement.**

Please refer to the Netflix Art Style Guide for all art requirements and requests. A Style Guide can be requested via email at DLCreativeServices@netflix.com.

9.1.1 Feature Film / Television Series Display Art - Vertical (Layered)

Three (3) high-resolution images (see detailed specs below 9.1.1 to 9.1.3) are required for every Title that represents the feature film or television series/collection as a whole.

<table>
<thead>
<tr>
<th>Art Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Aspect Ratio</td>
<td>1:1.40 (w:h) aspect ratio</td>
</tr>
<tr>
<td>Image Width/Height</td>
<td>571 (w) x 800 (h) pixels</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>300 dpi</td>
</tr>
<tr>
<td>File Format</td>
<td>Delivery of file in both layered PSD &amp; JPEG formats preferred. If a layered file is not available, uncompressed PNG, TIFF, EPS and JPEGs with “maximum quality” compression are acceptable.</td>
</tr>
<tr>
<td>Color Mode</td>
<td>RGB Color (8-bits/channel). Conversions from CMYK are undesirable.</td>
</tr>
<tr>
<td>Image Area</td>
<td>Vertical Art shall extend over entire image area and be two-dimensional. No extraneous graphics (borders, frames or drop shadows). Do not place any text, taglines or important parts of the art in the bottom 1/5 of the image, to allow for a “New to Site” or similar overlays.</td>
</tr>
<tr>
<td>Image Content</td>
<td>Vertical Art shall represent the feature film or television series/collection as a whole and shall include Title Treatment.</td>
</tr>
<tr>
<td>Graphical Elements</td>
<td>Vertical Art shall represent the feature film or television series/collection as a whole and shall be a compelling image (such as key art or a cast photo with Title Treatment). Title Treatment must be on one layer and the art on another textless layer. Art shall not have graphical elements such as: Season, Now on DVD, Widescreen, Coming Soon, Available on Blu-ray, press quotes, credits, etc.</td>
</tr>
<tr>
<td>File-naming Convention</td>
<td>[Netflix-Feature-Film-Title/Television-Series-Title]<em>[Language_Territory]<em>571x800</em>[TitleID] or [Netflix-Feature-Film-Title/Television-Series-Title]</em>[Language_Territory]_571x800</td>
</tr>
</tbody>
</table>

**Example of Feature Film:** True-Grit_EN_US_571x800_70142543 or True-Grit_EN_US_571x800

**Example of Television Series:** Friends_EN_US_571x800_70153404 or Friends_EN_US_571x800
### 9.1.2 Feature Film / Television Series Display Art - Horizontal (Layered)

<table>
<thead>
<tr>
<th>Art Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Aspect Ratio</td>
<td>16:9 (w:h) aspect ratio</td>
</tr>
<tr>
<td>Image Width/Height</td>
<td>1280 (w) x 720 (h) pixels</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>300 dpi</td>
</tr>
<tr>
<td>File Format</td>
<td>Delivery of file in both layered PSD &amp; JPEG formats preferred. If a layered file is not available, uncompressed PNG, TIFF, EPS and JPEGs with “maximum quality” compression are acceptable.</td>
</tr>
<tr>
<td>Color Mode</td>
<td>RGB Color (8-bits/channel). Conversions from CMYK are undesirable.</td>
</tr>
<tr>
<td>Image Area</td>
<td>Horizontal Art shall extend over entire image area and be two-dimensional. No extraneous graphics (borders, frames or drop shadows).</td>
</tr>
<tr>
<td>Image Content</td>
<td>Horizontal Art shall represent the feature film or television series/collection as a whole and shall include Title Treatment.</td>
</tr>
<tr>
<td>Graphical Elements</td>
<td>Horizontal Art shall represent the feature film or television series/collection as a whole and shall be a compelling image (such as key art or a cast photo with a Title Treatment). Title Treatment must be on one layer and the art on another textless layer. Art shall not have graphical elements such as: Season, Now on DVD, Widescreen, Coming Soon, Available on Blu-ray, press quotes, credits, etc.</td>
</tr>
<tr>
<td>File-naming Convention</td>
<td>[Netflix-Feature-Film-Title/Television-Series-Title]<em>[Language_Territory]<em>1280x720</em>[TitleID] or [Netflix-Feature-Film-Title/Television-Series-Title]</em>[Language_Territory]_1280x720</td>
</tr>
</tbody>
</table>

**Example of Feature Film**: True-Grit_EN_US_1280x720_70142543 or True-Grit_EN_US_1280x720

**Example of Television Series**: Friends_EN_US_1280x720_70153404 or Friends_EN_US_1280x720

### 9.1.3 Feature Film / Television Series Display Art - Title Card (Layered)

<table>
<thead>
<tr>
<th>Art Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Aspect Ratio</td>
<td>16:9 (w:h) aspect ratio</td>
</tr>
<tr>
<td>Image Width/Height</td>
<td>265 (w) x 149 (h) pixels</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>300 dpi</td>
</tr>
<tr>
<td>File Format</td>
<td>Delivery of file in both layered PSD &amp; JPEG formats preferred. If a layered file is not available, uncompressed (.png, .tiff, .eps) and JPEGs with “maximum quality” compression are acceptable.</td>
</tr>
<tr>
<td>Color Mode</td>
<td>RGB Color (8-bits/channel). Conversions from CMYK are undesirable.</td>
</tr>
<tr>
<td>Image Area</td>
<td>Title Card shall extend over entire image area and be two-dimensional. No extraneous graphics (borders, frames or drop shadows).</td>
</tr>
<tr>
<td>Image Content</td>
<td>Title Card shall have Title Treatment with a thematic background of the feature film or television series/collection.</td>
</tr>
<tr>
<td>Graphical Elements</td>
<td>Title Treatment must be on one layer and the art on another textless layer. Art shall not have graphical elements such as: Season, Now on DVD, Widescreen, Coming Soon, Available on Blu-ray, press quotes, credits, logos, etc.</td>
</tr>
</tbody>
</table>
9.1.4 Feature Film / Television Series - Stills

Three (3) high-resolution images (see detailed specs below) are required for every Title that represents the feature film or three (3) per television series/collection episode. All images must be cleared for promotional use.

<table>
<thead>
<tr>
<th>Art Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Aspect Ratio</td>
<td>16:9 (w:h) or 4:3 (w:h)</td>
</tr>
<tr>
<td>Image Width/Height</td>
<td>1920 (w) x 1080 (h) or 1440 (w) x 1080 (h) pixels</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>300 dpi</td>
</tr>
<tr>
<td>File Format</td>
<td>Delivery of file an uncompressed JPEG or JPEG with “maximum quality” compression.</td>
</tr>
<tr>
<td>Color Mode</td>
<td>RGB Color (8-bits/channel). Conversions from CMYK are undesirable.</td>
</tr>
<tr>
<td>Image Area</td>
<td>Still shall extend over entire image area and be two-dimensional. No extraneous graphics (borders, frames or drop shadows).</td>
</tr>
<tr>
<td>Image Content</td>
<td>Three (3) stills per feature film/television episode required. For television series/collections, stills shall be provided per episode representing that episode best. For feature films, a still that represents the film as a whole. No weapons pointing at camera, extreme gore, salaciousness or dark/dim lighting (unless specifically requested).</td>
</tr>
</tbody>
</table>

File-naming Convention

**Example of Feature Film:** True_Grit_EN_US_V1_70142543 or True_Grit_EN_US_V1
[Netflix_Feature_Film_Title]_[Language_Territory]_V#_[TitleID] or
[Netflix_Feature_Film_Title]_[Language_Territory]_V#

**Example of Television Series:** Friends_S1_A_Partial_Episode_Name_EN_US_V1_70153404 or Friends_S1_A_Partial_Episode_Name_EN_US_V1
[Television_Series_Title]_S1_A_Partial_Episode_Name_[Language_Territory]_V#_[TitleID] or
[Television_Series_Title]_S1_A_Partial_Episode_Name_[Language_Territory]_V#

9.1.5 Feature Film / Television Series - Story Art

One (1) high-resolution image (see detailed specs below) is required for every feature film and every television series/collection (Story Art is not necessary per episode) that represents the main character in a scene/staged scene that depicts the theme of the Title.

<table>
<thead>
<tr>
<th>Art Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Aspect Ratio</td>
<td>16:9 (w:h)</td>
</tr>
<tr>
<td>Image Width/Height</td>
<td>1920 (w) x 1080 (h) pixels</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>300 dpi</td>
</tr>
<tr>
<td>File Format</td>
<td>Delivery of file an uncompressed JPEG or JPEG with “maximum quality” compression.</td>
</tr>
<tr>
<td>Color Mode</td>
<td>RGB Color (8-bits/channel). Conversions from CMYK are undesirable.</td>
</tr>
</tbody>
</table>
9.1.6 Feature Film / Television Series - Character Art

One (1) high-resolution image (see detailed specs below) is required for every feature film or television series (animated or live action) that is appropriate for viewing by children and family. Character Art must be a full-body character image on a transparent background.

<table>
<thead>
<tr>
<th>Art Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Aspect Ratio</td>
<td>Variable</td>
</tr>
<tr>
<td>Image Width (w)</td>
<td>Variable</td>
</tr>
<tr>
<td>Image Height (h)</td>
<td>720 pixels (no less)</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>300 dpi</td>
</tr>
<tr>
<td>File Format</td>
<td>Delivery of file in layered PSD or EPS with transparent background preferred. If these file formats are not available, an uncompressed PNG or TIFF with “maximum quality” is acceptable.</td>
</tr>
<tr>
<td>Color Mode</td>
<td>RGB Color (8-bits/channel). Conversions from CMYK are undesirable.</td>
</tr>
<tr>
<td>Image Area</td>
<td>Character Art shall extend over entire image area and be two-dimensional. No extraneous graphics (borders, frames or drop shadows).</td>
</tr>
<tr>
<td>Image Content</td>
<td>The full-body character shall not be obstructed by text, objects or other characters and should have a transparent background. The character’s stance, as well as colors, shall be compelling and dynamic. Character Art shall not include any borders or frames.</td>
</tr>
<tr>
<td>File-naming Convention</td>
<td>[Netflix-Feature-Film-Title/Television-Series-Title]<em>[Language_Territory]<em>CHARACTER</em>[TitleID] or [Netflix-Feature-Film-Title/Television-Series-Title]</em>[Language_Territory]_CHARACTER</td>
</tr>
</tbody>
</table>

Example of Feature Film: True-Grit_EN_US_CHARACTER_70142543 or True-Grit_EN_US_CHARACTER

Example of Television Series: Friends_EN_US_CHARACTER_70153404 or Friends_EN_US_CHARACTER
10 Appendix

10.1 Language Codes

Please note that if the desired language code is not found in the table below please contact Netflix Operations.

<table>
<thead>
<tr>
<th>Language Name</th>
<th>Language Code</th>
</tr>
</thead>
<tbody>
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<td>Albanian</td>
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<td>Arabic</td>
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<td>Aramaic</td>
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<td>en-GB</td>
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<td>Faroese</td>
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<tr>
<td>Language</td>
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<tr>
<td>Language</td>
<td>Code</td>
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10.2 Approved MPEG-2 Mezzanine Creation Tools

Most commercial grade encoding solutions now offer Netflix-approved profiles. Please check http://digitalbacklot.netflix.com/ for profiles and more info, including how-to videos.

10.2.1.1 Mac-Based Platforms

Final Cut Pro 7.0 is a great solution for most non-linear editing requirements, but Compressor® is not capable of outputting mezzanine files to our specs. Netflix strongly suggests using the HDProQT® QuickTime Export Component available from Pixel Tools® www.pixeltools.com. It works from within Final Cut Pro 7.0 to allow you to export a file directly from the timeline into a Netflix-compliant mezzanine file, and ships with Netflix-approved profiles.

10.2.1.2 Windows-Based Platforms

There are numerous Windows-based non-linear editing tools in use, but Adobe Premiere Pro® is probably the most common, with Avid Media Composer being widely used as well. Both are capable of outputting files that will meet our requirements.

The HDProQT QuickTime Export Component available from www.pixeltools.com also works very nicely on a Windows system and is our choice for the most direct way to get files into our Netflix mezzanine format.

More sophisticated, scalable and Enterprise-focused encoding tools are available from Digital Rapids® (Transcode manager with Streamz). The Harmonic Rhozet Carbon Coder® and Carbon Coder Server are excellent solutions used by our largest partners.

If you prefer to work with tools that generate elementary streams, and then manually mux them together, the only tool Netflix has been able to approve is any of the versions of the MPEG-2 Transport Stream Multiplexers from Manzanita® www.manzanitasystems.com.

For analysis, Netflix finds that the freeware tools from mediainfo.sourceforge.net are an excellent way to get a quick summary of the encoding profile and to confirm that the file is using an I-Frame-only GOP structure.

For deeper analysis internally at Netflix, we will frequently use a combination of the Interra Systems® Vega Analyzer and the Sencore CMA 1820, with the PTS/DTS modules. If you are using our recommended encoding tools, it is unlikely that you will need to enlist these heavy-duty tools for troubleshooting mux-related errors.
10.3 Change Log History

Change Log A-5-3

Section 1, Objective
- Removed reference to DVD & Blu-ray, as this is not necessarily the native aspect ratio and frame rate.

Section 2, Overview
- Changed desired video source terminology from “Textless, with Texted Mains and Ends” to “Non-Subtitled.” Changed definition of what text is to be included in source.
- Changed language around use of Content Management Portal.

Section 3, Primary Digital Asset Specifications:
- Request for Constant Bit Rate mezzanine files. Previously this was undefined and mezzanine files could be either Constant Bit Rate or Variable Bit Rate.

Section 4.1, Subtitles as a Separate File:
- Changed definition of what text is to be included in subtitle files.
- Positional data is now required if subtitle would otherwise obscure burned-in text.

Section 4.1.1, Forced Narrative Subtitles
- Changed examples of what type of text is to be included in Forced Narrative Subtitles.

Section 4.2, Accessibility Files (CC and SDH)
- Defined CC as English language only.
- Clarified that only dialogue that was intended to be understood needs to be transcribed.
- Added support for xml extension for dfxp subtitles.

Section 4.2.2, Closed Captioning and SDH as a Separate File
- Positional data is now required if caption or subtitle would otherwise obscure burned-in text.

Section 4.3 Alternate Language Audio as a Separate File
- Lectern-style (single narrator for all characters) dubs are not acceptable.

Section 4.3.1, Acceptable Alternate Language Audio Formats (non-QuickTime)
- Request for Constant Bit Rate audio files. Previously this was undefined and audio files could be either Constant Bit Rate or Variable Bit Rate.

Section 7, Scripts
- This section has been removed.
- Section 7 is now titled Delivery via Aspera.

Section 8, Content Management Portal
- Changed language around use of Content Management Portal.

Section 10.1 Language Codes
- Updated list of languages to add support for an additional 11 languages.

Change Log 5-2

Section 2: Source Material Requirements
- Added language for acceptable 1 frame to 1 second of black if delivering a ProRes file: All files must consist of the feature program with one (1) second of black at the head and tail of the program (one [1] frame to one [1] second of black is acceptable if providing ProRes files).
- Removed sentence: “MPEG 2 Program stream files are not acceptable under any circumstance.” We require Transport stream. But we do have some circumstances where we accept PS if no other option is available and there is a tight window of delivery.
• Changed “texted, non-subtitled” to “Our preference is to receive a **textless version of the content, with texted mains and ends.**” Definition did not change, just our terminology as it was causing some confusion.

**Section 2.3: Primary Mezzanine Audio Prerequisites**

• Changed title of section from “Digital Audio Prerequisites” to “Primary Mezzanine Audio Prerequisites
• Added “Do not create a 2.0 track by simply mixing down the 5.1 track. “
• Added “Within the MPEG-TS or MOV container, audio must conform (sync) to video” –this should be obvious but is now explicitly called out.
• Added “Please pay special attention to the audio track / channel assignments defined in the iTunes Package Asset Specifications.”

**Section 3.2: ProRes 422 HQ Specifications**

• Added:
  o Please pay careful attention to the “Normal Size” and “Display Size” in the video track properties accessible in QuickTime Pro. Please ensure the aspect ratio you are intending is correctly displaying in QuickTime. The iTunes Package Asset Specifications clearly defines the acceptable display sizes for content.
• Added:
  o Please pay careful attention to the audio track / channel assignments defined in the iTunes Package Asset Specifications. All channels must be tagged in accordance with the iTunes spec.

**Section 4.1: Subtitle as a Separate File**

• Added “Whenever possible, please include positional data in the subtitle files.”
• Added: “or company credits” to “Subtitle files must not be censored or contain advertisements, placards, overlay branding, website link callouts or company credits.”
• Moved subtitles file type list from 4.1.1 to 4.1 and changed list to indicate preferences:
  o Preferred formats (due to support of positional data)
    ▪ STL (EBU) – preferred
    ▪ DFXP
  o Alternate Acceptable formats to be used only when positional data is not available or needed
    ▪ SRT
    ▪ SMI
• Moved following section from 4.1.1 to 4.1:
  o For SMI and SRT, the files default character set is Windows-1252. If either UTF-8, UTF16LE, or UTF-16BE is used, the file MUST start with the appropriate byte order mark (BOM). One way to set the BOM is to open in Notepad, and use <File><Save-as>, and selecting either “ANSI” (Windows-1252), “UTF-8”, or “Unicode” (UTF-16 little endian) or “Unicode big endian” (UTF-16 big endian) from the “Encoding” combo box. For information on BOM, see: [http://en.wikipedia.org/wiki/Byte_order_mark](http://en.wikipedia.org/wiki/Byte_order_mark).
  o If your text-based subtitle format is not listed above, please contact Netflix to discuss other options.

**Section 4.1.1: Forced Narrative Subtitles**

• Added example of what forced narrative subtitles include:
  o *For example: An English-language film has 5 minutes of Japanese dialogue and is to be streamed to U.S. customers. The desired video would not include burned-in subtitles for the Japanese
sections. A Forced Narrative subtitle file would be supplied that contains the Japanese dialogue translated into English. The Forced Narrative file would not have the original English dialogue transcribed.

Section 4.2: Accessibility Files (CC and SDH)
- Added: “CC and SDH must encompass all the spoken dialogue in the content. If the content has multiple spoken languages, they all must be translated and present in the CC or SDH file.”

Section 4.2.1: Closed Captions as Embedded Data
- Changed title of section from “Closed Captions as Ancillary Data” to “Closed Captions as Embedded Data”

Section 4.2.2: Closed Captioning and SDH as Separate File
- Identified CC and SDH delivered as a separate file is preferred over embedded CC in the mezzanine
- Organized the some technical information into bullets:
  - Raster image-based closed captioning/SDH will not be accepted.
  - CC/SDH files must conform, within a half second, to the Primary Video Mezzanine that is delivered or to the Netflix-provided Proxy File.
  - CC/SDH files must not be censored or contain advertisements, placards, overlay branding, website link callouts or company credits.
  - All CC/SDH files need to start at hour 00. Netflix does not accept the CC/SDH timestamps to start at hour 01, which is common on the tape.
  - Whenever possible, please include positional data in the subtitle files.
  - Our preference is to receive captions in the “pop on” style.
- Added detail on our preference of file type for SDH files as well as qualifying when a vendor may deliver SMI files:
  - Acceptable SDH Files:
    - STL (EBU) - preferred
    - DFXP
    - SMI (acceptable if there is no need for positional data)

Section 4.3: Alternate Language Audio as a Separate File
- Clarified that we want separate files for 5.1 and 2.0 alternate language audio files. This differs from Primary Mezzanine audio where all 8 channels should be on one track in the mezzanine file.

Section 4.3.2: Acceptable Alternate Language Audio Formats (QuickTime)
- Added “Please pay special attention to the audio track / channel assignments defined in the iTunes Package Asset Specifications. All channels must be tagged in accordance with the iTunes spec.”

Section 5.1: Primary Video Asset File-Naming
- Clarified naming convention for 2 channel .mpg file = _LT_RT_
- Added naming convention for audio channel value for 2 channel QuickTime .mov file = _L_R_

Section 5.2: Alternate Language Audio File-Naming
- Clarified naming convention for 2 channel .mpg or .mp4 file = _LT_RT_
- Added naming convention for audio channel value for 2 channel QuickTime .mov file = _L_R_

Section 5.5: Test File-Naming
- Added this section to define how we want test files named.
Section 9.1: Feature Film / Television Series Art

- Added:
  - Images provided will be used within the Netflix service (including, without limitation, on all Netflix ready devices, through the website, User Interfaces, applications, blogs, social networking sites and our communications with members and potential members) and in marketing materials promoting the titles’ availability on Netflix.

Section 9.1.4: Feature Film / Television Series - Stills

- Changed required number of stills from 2 per viewable to 3
- Added: “All images must be cleared for promotional use.”