

Submission Guidelines

We distribute high quality media streams to a wide variety of outlets including OTT, Mobile, the Web, Xbox, Playstation, and Smart TVs. For this, it is necessary for us to receive the highest quality source material which are then streamed as **Titles**.

A complete Title includes:

Video(s)

Trailer

Artwork

Metadata

Closed Captions**

Adhering as close as possible to the requirements set forth in this document, allows for us to provide the best viewer experience and the quickest time from receipt of source to broadcast.

**Closed Captions: FCC rules require captioned programs shown on U.S. TV after September 2012 to be captioned when re-shown on the Internet. For complete federal guidelines see: <https://www.fcc.gov/guides/captioning-internet-video-programming>

Contents

Section 1: **Video Asset Files** (pg. 2)

Section 2: **Artwork Specifications** (pg. 9)

Section 3: **Closed Captions** (pg. 11)

Section 4: **Metadata guidelines** (pg. 11)

Section 5: **File Delivery** (pg. 12)

Section 1: Video Asset Files

Content Types

A **Title** can be categorized as either a **Movie** or a **Series**.

- A **Movie** is a self contained **Title** that is not associated with any other **Title**.
 - An example of this would be the movie *Top Gun*.
- A **Series** consists of a **Series Title** associated with multiple **Episode Titles**.
 - An example would be the **Series Title** *Camelot* which is associated with the **Episode Titles** *Homecoming*, *The Sword and the Crowd*, etc.
- All **required** assets (metadata, video(s), artwork, trailer(s), CCs*) must be received up to spec before we can begin processing a title.

General Title Specifications For The Video Asset

- **Program Material** is the actual video content that is to be shown to the viewer. There must be no more than 2 seconds of black before and after the **Program Material**.
- **Program Material** must not contain color bars, production credits, overlays, advertisements, textless elements, or QuickTime edit lists. Burned in Closed Captions will only be accepted with special permission.
- There can be no periods of black longer than 1 second within the **Program Material**.
- There must be only 1 video stream along with at least one stereo audio stream in the file.
- Each **Title** must be self-contained. E.g. If the **Title** is a 120 minute movie it must be received as a single 120 minute media file.

Video Formats

The *preferred* video codecs in decreasing order are:

- **ProRes 422 HQ**
- **ProRes 422**
- **H.264 (AVC)**

Accepted file container formats are:

- **.mov**
- **.mp4**
- **.mpeg**
- **.mpg**
- **.mxf**

ProRes is a lightly compressed codec whose bit rates fall within fairly defined limits within each type. The **ProRes Target Data Rates** chart shows the standard bit rate range we require for each of the two accepted types. **H.264 (AVC)** is a much heavier compressed format and the bit rate is more dependent on the actual content of the source. A video with a lot of motion generally has a higher bitrate than a video with a low amount of motion. Because of this you will find a much greater difference in **H.264 (AVC)** bit rates. The **H.264 Target Data Rate Chart** shows the bit rate range we require for **H.264 (AVC)** submissions.

Frame Rates

- Accepted frame rates are **23.976, 24, 25, 29.97p, 50i, 59.94i** fps.
- If the native frame rate is one of our accepted rates, we would prefer to receive that native frame rate. However, if the native frame rate is not an accepted frame rate, conversion is required.
- Interlaced content is only accepted for SD content or for HD content at 59.94i fps.

Resolution

- Native resolution is required along with a **minimum size of 640x480 pixels**.
- Preferred resolution is **1920x1080**
- All upscaled content will be rejected.

H.264 (AVC) Target Data Rates

Quality	Bitrate (kbit/s)
SD	2,000 – 5,000
720p	5,000 – 10,000
1080p	10,000 – 20,000

ProRes Target Data Rates

Dimensions	Frame Rate	ProRes 422 (Proxy)		ProRes 422 (LT)		ProRes 422	
		Mb/s	GB/hr	Mb/s	GB/hr	Mb/s	GB/hr
720 x 486	24p	10	4	23	10	34	15
	60i, 30p	12	5	29	13	42	19
720 x 576	50i, 25p	12	6	28	13	41	18
960 x 720	24p	15	7	35	16	50	23
	25p	16	7	36	16	52	24
	30p	19	9	44	20	63	28
	50p	32	14	73	33	105	47
	60p	38	17	87	39	126	57
1280 x 720	24p	18	8	41	18	59	26
	25p	19	9	42	19	61	28
	30p	23	10	51	23	73	33
	50p	38	17	84	38	122	55
	60p	45	20	101	46	147	66
1280 x 1080	24p	31	14	70	31	101	45
	60i, 30p	38	17	87	39	126	57
1440 x 1080	24p	31	14	70	31	101	45
	50i, 25p	32	14	73	33	105	47
	60i, 30p	38	17	87	39	126	57
1920 x 1080	24p	36	16	82	37	117	53
	50i, 25p	38	17	85	38	122	55

Audio Formats

Preferred delivered audio formats include:

- **PCM 16-32 bit, 44.1k-48kHz audio**
- **AAC audio**
- ***A stereo audio stream is required when available***
- Any extra audio channels should be mapped as described in the Audio Mapping Guidelines.
- **Important: A stereo stream or correctly labeled streams that can be down mixed to stereo are required.**

We require at least one channel of audio information with every video file. Our preference is to receive at minimum, a single stereo audio stream. In QuickTime, streams are called Audio Tracks. If there are more audio channels than the required stereo channels, they would have to be mapped correctly, with each additional audio channel in it's own individual stream. The *Additional Helpful Information* section provides a more detailed explanation of the differences between a stream and a channel

Different Types of Audio Channels and Groups of Channels

- **Mono** - One channel of audio information. This single channel is sent to both the left and the right speakers or headphones of whatever device is playing the media file.
- **Stereo** - 2 channels of individual audio information where one channel is sent to the left and one channel is sent to the right speakers or headphones of whatever device is playing the media file.
- **Surround Sound** - Multiple channels of separate audio information that are individually sent to different speakers in a surround sound system. The main configurations are 5.1 and 7.1. These contain 6 channels of information for 5.1 and 8 channels for 7.1. The .1 stands for a sub audio channel of very low frequency.
- **M+E** - This stands for Music and Effects. It is usually 2 channels of audio information which contains the entire audio mix, except for any dialogue. This is used in case a different language is needed to be overdubbed over the original soundtrack.

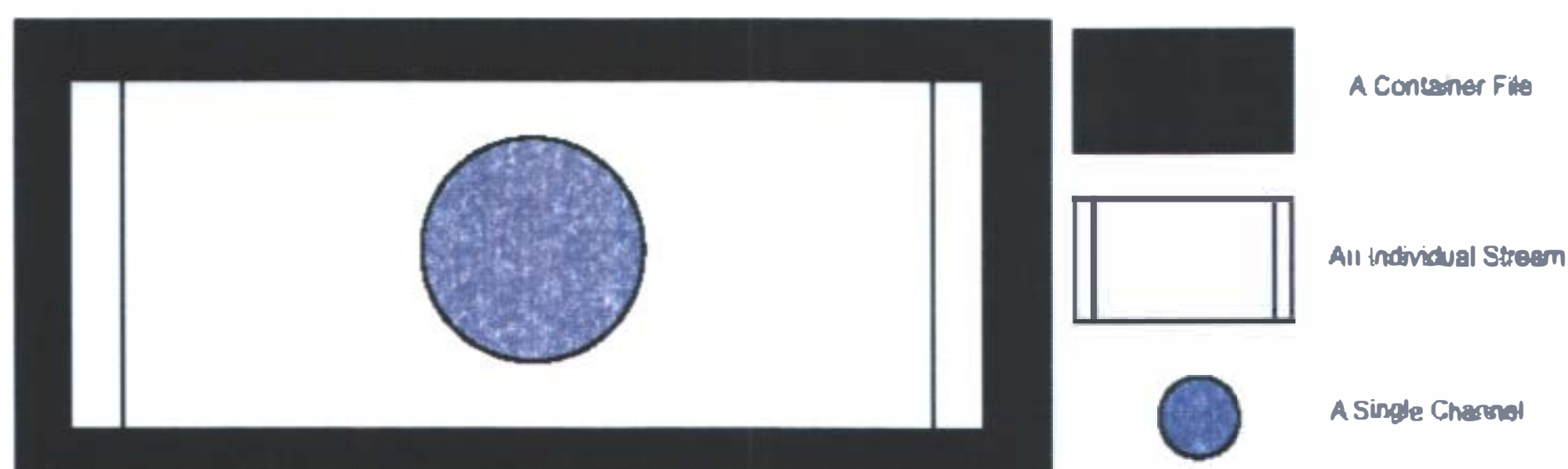
Understanding Channels, Streams, and Containers

To understand audio mapping, you must first understand the difference between a channel, a stream, and a container.

A **channel** is a single media signal. In a stereo stream you have two channels of audio, a left channel and a right channel. When sent to speakers, each channel contains just the information for either the left or right speaker.

An **audio stream** can contain one or more channels of audio information. This can be a 2 channel stereo stream with a right and left channel. It can be a 6 channel stream with 5.1 surround channels. It can also be a single channel such as the Left channel of a mix. They can all be found within 1 stream.

A **container** can be made up of one or more streams. Each stream contains a single type of media. These can be a video stream, audio channel(s), Closed Captions track, timecode information, or metadata. When the streams are combined or muxed, they are wrapped in what is called a container file. This container file has all of the media data with all the component media. For our purposes, the structure is analogous to a top level folder (Container) that has a folder inside (Stream) that has a folder inside (Channel). This is an extremely simplified explanation and is only used to show the nesting position for each part of the package. Common container types used in video are Quicktime (.mov, .qt, .mp4 extensions) and MPEG (.mpg, .mpeg extensions). Each one of these containers has their own benefits and limitations (see https://en.wikipedia.org/wiki/Comparison_of_video_container_formats for details).



This shows a Container file with an individual Stream that contains One Channel of media.

An example of **correctly** mapped audio would be (Quicktime Inspector view):

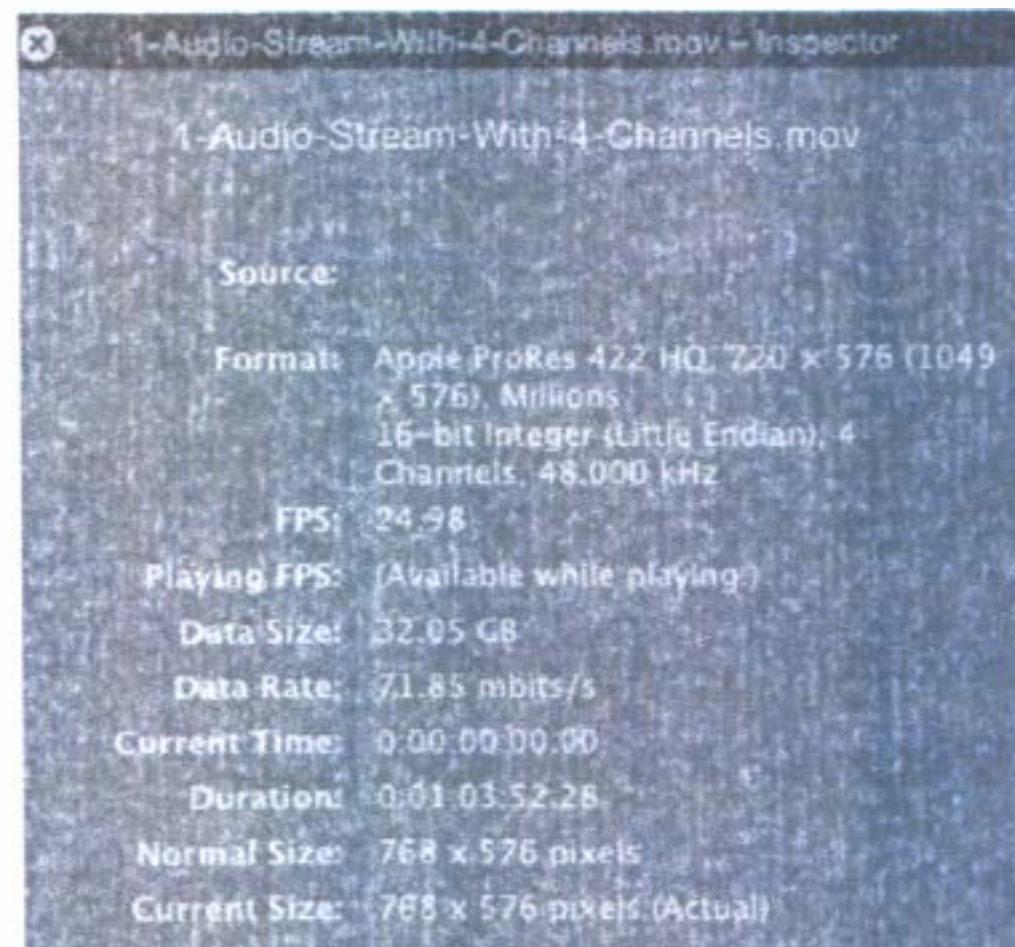
```
Source:
Format: Apple ProRes 422 HQ, 1920 x 1080,
Millions
24-bit Integer (Little Endian), Left,
48.000 kHz
24-bit Integer (Little Endian), Right,
48.000 kHz
24-bit Integer (Little Endian), Center,
48.000 kHz
24-bit Integer (Little Endian), LFE
Screen, 48.000 kHz
24-bit Integer (Little Endian), Left
Surround, 48.000 kHz
24-bit Integer (Little Endian), Right
Surround, 48.000 kHz
24-bit Integer (Little Endian), Stereo,
48.000 kHz
FPS: 23.98
Playing FPS: (Available while playing.)
Data Size: 27.82 GB
Data Rate: 179.65 mbits/s
Current Time: 0:00:00.00
Duration: 0:00:22:10.78
Normal Size: 1920 x 1080 pixels
Current Size: 1920 x 1080 pixels (Actual)
```



This particular file has 7 individual audio streams along with the ProRes 422 HQ video stream. The stream order is:

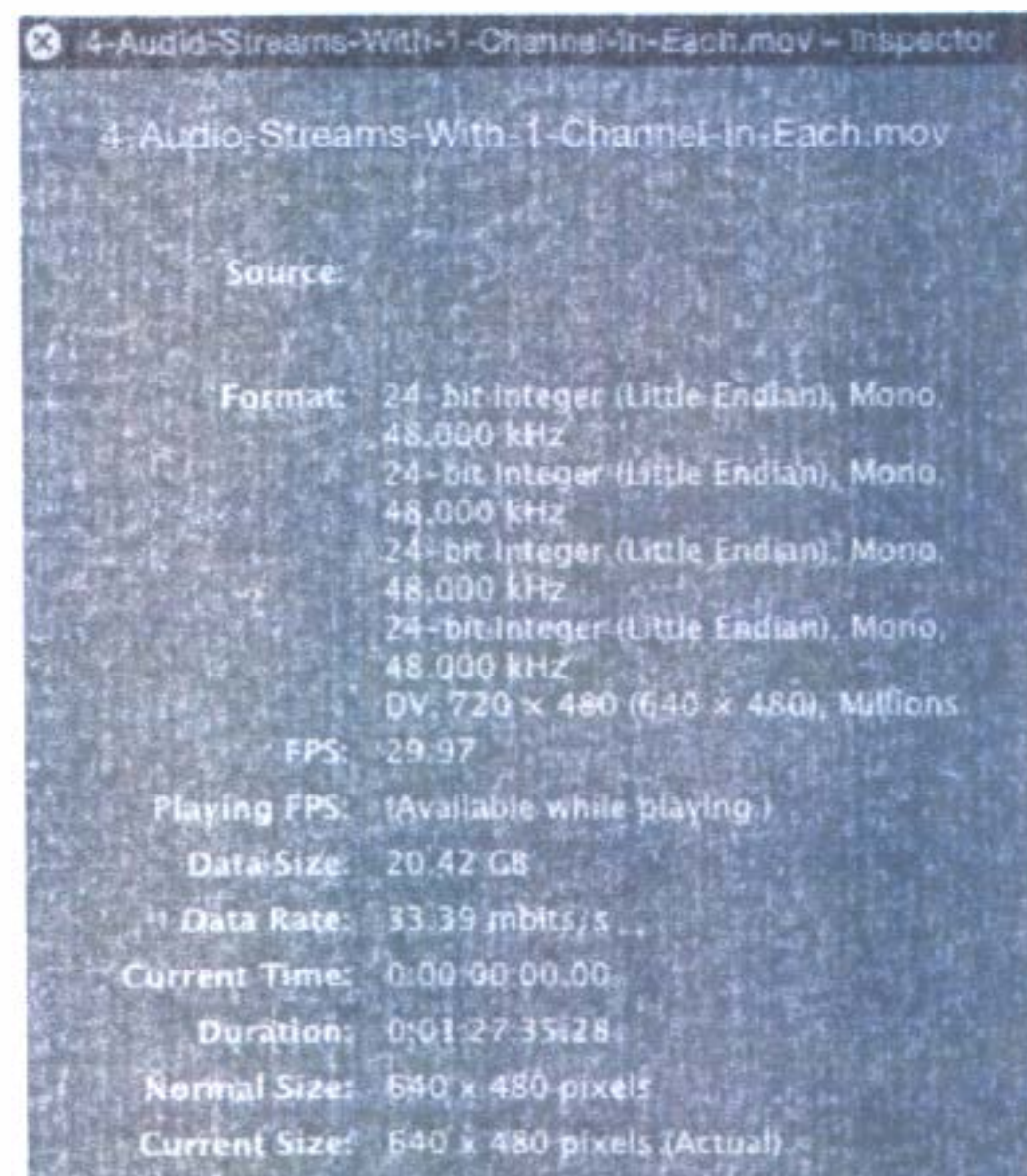
- Stream 1: ProRes 422 HQ Video
- Stream 2: Left Channel Audio
- Stream 3: Right Channel Audio
- Stream 4: Center Channel Audio
- Stream 5: LFE Channel Audio
- Stream 6: Left Surround Channel Audio
- Stream 7: Right Surround Channel Audio
- Stream 8: Stereo Channel

An example of **incorrectly** mapped audio would be (Quicktime Inspector view):



This particular file has 4 audio channels in one stream along with the ProRes 422 HQ video stream.

Another example of **incorrectly** mapped audio would be (Quicktime Inspector view):



This particular file has 4 audio streams with one channel of audio in each stream along with the DV video stream.

Section 2: Artwork Specifications

Before any **Title** goes live, all needed artwork must be received and approved. A **Film or Series** will have three different images associated with it; a **Poster Image**, **Landscape Image**, and **Hero Image**. The specifications are as follows:

Image Parameters for Films and Series

- JPEG or PNG (quality unconstrained)
- RGB
- Max file size for images is 6MB and must contain no more than 70,000,000 pixels.
Please resize your images as needed

Image 1: Poster / Title Image

- **Size:** At least **900 x 1285** pixels at 72 dpi
- **Aspect Ratio:** .7
- **Additional Information:**
 - Do **not** include credits, ratings, company logos, and promotional information on the artwork image.
 - Include all image text within the title safe area (approx. 90% of poster dimensions)

Title Safe:



Real World Example:



Image 2: Landscape Image

- **Size:** At least 896 x 504 pixels at 72 dpi
- **Aspect Ratio:** 1.77
- **Additional Information:** Images **must** contain the **title**, preferably without any other additional text. Required only for Movies and Series

Title Safe:



Real World Example:



Image 3: Hero Image

- **Size:** At least 1920 x 1080 pixels at 72 dpi
- **Aspect Ratio:** 1.7778 (16:9)
- **Additional Information:** Do **not** include any text, including title art, credits, ratings, company logos, and promotional information on the artwork image.

Real World Example:



Section 3: Closed Captions

FCC rules require captioned programs shown on U.S. TV after September 2012 to be captioned when re-shown on the Internet. For complete federal guidelines see:

<https://www.fcc.gov/guides/captioning-internet-video-programming>

All Closed Captions must be delivered at the same frame rate as the source video. Closed Caption timecode should be normalized to a 00:00:00 start time so that the Closed Captions are in sync with the video (Closed Captions starting at 01:00:00 will be rejected).

Accepted formats are

- .SRT files with UTF-8 encoding
- .VTT files with UTF-8 encoding
- .SCC files

Section 4: Metadata Guidelines

We ask that all assets per a title package are delivered at the same time. If you are unable to supply all at once, metadata should be supplied first. Note that we are unable to begin processing a title package until we have received metadata up to spec with filenames.

We have CSV Metadata Templates (movie/episodic/series):

<https://s3.amazonaws.com/content-ad-operations/content-operations/Tubi-Metadata-CSV.zip>

A PDF with further information on how to fill out the cells is included for your reference:

<https://s3.amazonaws.com/content-ad-operations/content-operations/MetadataFieldsDocumentation.pdf>

Section 5: File Delivery

We have a dedicated website for delivering all of your files. The link below will direct you to the upload portal where you should be prompted to download the client software (necessary for uploading files). You should have received portal login details during your onboarding; however, if you don't have your login information,

FTP Guidelines Doc:

https://s3.amazonaws.com/content_ad-operations/content-operations/FTPGuidelines.pdf

Upload Portal:

will provider

Should you be unable to deliver directly to our File Transfer Portal per the outlined specs in this documentation, you will be referred to one of our preferred post production houses to coordinate pre-processing and delivery for the redeliveries and title batches moving forward.

Please reach out to your Partner Support contact should you have any questions about how to get into contact with the post production house contact for delivery.