



Schedule D

Technical Specifications

Version 1.2

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INTRODUCTION

This document defines the delivery specifications for Disney Acquisition Content, primarily to be utilized for Disney+ and content sales divisions. This has been created by collaborating with numerous business units at Disney in order to agree upon common specifications for multiple lines of business.

VIDEO SPECIFICATIONS

Ultra High Definition HDR - Apple ProRes 4444 (XQ)

Note: This deliverable also requires a sidecar Dolby Vision XML file. Those specifications can be found [here](#).

Video Technical Requirements	
Container /Wrapper	Quicktime (.mov)
Codec	Apple ProRes 4444 (XQ)
Resolution	3840x2160
Display Aspect Ratio	16x9
Pixel Aspect Ratio	1:1
Frame Rate	23.976 or 25 [as source]
Scanning Method	Progressive
Bits per Sample	12 bits
Chroma Sub-Sampling	4:4:4
Color Primaries	BT 2020
MasteringDisplayColorSpace	P3 D65
Transfer Characteristics	ST 2084 (PQ)
Matrix Coefficients	BT 2020 non-constant
Peak Luminance	1000 nits
Audio Technical Requirements	
Container /Wrapper	Quicktime (.mov) [Self-Contained]
Codec	Linear PCM
Sample Rate	48kHz
Bit Rate	Uncompressed
Bit Depth	24-Bit
Channels	Discrete
Tracks	16-24
Audio Configuration	<i>See Audio Track Layout Table</i>

Ultra High Definition SDR - Apple ProRes 422 (HQ)

Video Technical Requirements	
Container /Wrapper	Quicktime (.mov)
Codec	Apple ProRes 422 (HQ)
Resolution	3840x2160
Display Aspect Ratio	16x9
Pixel Aspect Ratio	1:1
Frame Rate	23.976, 25 [as source]
Scanning Method	Progressive
Bits per Sample	10 bits
Chroma Sub-Sampling	4:2:2
Color Space	BT 709
Audio Technical Requirements	
Container /Wrapper	Quicktime (.mov) [Self-Contained]
Codec	Linear PCM
Sample Rate	48kHz
Bit Rate	Uncompressed
Bit Depth	24-Bit
Channels	Discrete
Tracks	16-24
Audio Configuration	<i>See Audio Track Layout Table</i>

High Definition - Apple ProRes 422 (HQ)

Video Technical Requirements	
Container /Wrapper	Quicktime (.mov)
Codec	Apple ProRes 422 (HQ)
Resolution	1920x1080
Display Aspect Ratio	16x9
Pixel Aspect Ratio	1:1
Frame Rate	23.976, 25 [as source]
Scanning Method	Progressive
Bits per Sample	10 bits
Chroma Sub-Sampling	4:2:2
Color Space	BT 709
Audio Technical Requirements	
Container /Wrapper	Quicktime (.mov) [Self-Contained]
Codec	Linear PCM
Sample Rate	48kHz
Bit Rate	Uncompressed
Bit Depth	24-Bit
Channels	Discrete
Tracks	16-24
Audio Configuration	<i>See Audio Track Layout Table</i>

Standard Definition NTSC - Apple ProRes 422 (HQ)

Video Technical Requirements		
Rendition	16x9	4x3
Container / Wrapper	Quicktime (.mov)	Quicktime (.mov)
Codec	Apple ProRes 422 (HQ)	Apple ProRes 422 (HQ)
Resolution	720x480	720x480
Display Aspect Ratio	16x9	4x3
Pixel Aspect Ratio	32:27	8:9
Frame Rate	23.976, 29.97 [as source]	23.976, 29.97 [as source]
Scanning Method	Progressive	Progressive
Chroma Sub-Sampling	4:2:2	4:2:2
Color Space	BT 601	BT 601
Audio Technical Requirements		
Container / Wrapper	Quicktime (.mov) [Self-Contained]	Quicktime (.mov) [Self-Contained]
Codec	Linear PCM	Linear PCM
Sample Rate	48kHz	48kHz
Bit Rate	Uncompressed	Uncompressed
Bit Depth	24-Bit	24-Bit
Channels	Discrete	Discrete
Tracks	16-24	16-24
Audio Configuration	<i>See Audio Track Layout Table</i>	<i>See Audio Track Layout Table</i>

Standard Definition PAL - Apple ProRes 422 (HQ)

Video Technical Requirements		
Rendition	16x9	4x3
Container / Wrapper	Quicktime (.mov)	Quicktime (.mov)
Codec	Apple ProRes 422 (HQ)	Apple ProRes 422 (HQ)
Resolution	720x576	720x576
Display Aspect Ratio	16x9	4x3
Pixel Aspect Ratio	64:45	16:15
Frame Rate	25	25
Scanning Method	Progressive	Progressive
Chroma Sub-Sampling	4:2:2	4:2:2
Color Space	BT 601	BT 601
Audio Technical Requirements		
Container / Wrapper	Quicktime(.mov)[Self-Contained]	Quicktime (.mov) [Self-Contained]
Codec	Linear PCM	Linear PCM
Sample Rate	48kHz	48kHz
Bit Rate	Uncompressed	Uncompressed
Bit Depth	24-Bit	24-Bit
Channels	Discrete	Discrete
Tracks	16-24	16-24
Audio Configuration	<i>See Audio Track Layout Table</i>	<i>See Audio Track Layout Table</i>

HEAD & TAIL BUILD

Consisting of Line Up, Part Breaks and Textless Elements.

Line-Up				Part Breaks									
B/S	B/T	Slate	B/S	Part 1	B/S	Part 2	B/S	Part 3	B/S	Part 4		B/S	T/E
					12f		12fr		12fr			1500fr	
3600fr													
Line-Up				Seamless									
B/S	B/T	Slate	B/S									B/S	T/E
				e.g. 10:00:00:00 - 10:49:00:00								1500fr	
3600fr													

Legend:

B/S = Black & Silence

B/T = Bars & Tone

TE = Textless Elements

NOTE: Part breaks of 12 frames DO NOT need to be added for material that is already seamless.

Additional Note:

Video deliveries shall not include distribution bumpers before the Program, unless it is the original production company.

AUDIO TRACK LAYOUT TABLE

#	EBU R123	Tracks	Type	Audio Track Number															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	16:d	16	LM (Loc)	<u>Primary Language</u>								<u>Secondary Language</u>							
				L	R	C	LFE	Ls	Rs	Lo	Ro	L	R	C	LFE	Ls	Rs	Lo	Ro
2	16:b	16 (opt +24)	OV	<u>Primary Language</u>								<u>Music & Effects (M&E)</u>							
				L	R	C	LFE	Ls	Rs	Lo	Ro	L	R	C	LFE	Ls	Rs	Lo	Ro
3	16:d	16	LM (St.)	<u>Mute of Sound (MOS)</u>						<u>Primary Language</u>		<u>Mute of Sound (MOS)</u>						<u>Secondary Language</u>	
				MO S	MO S	MO S	MO S	MO S	MO S	Lo	Ro	MO S	MO S	MO S	MO S	MO S	MO S	Lo	Ro
4	16:b	16 (opt +24)	OV (St.)	<u>Mute of Sound (MOS)</u>						<u>Primary Language</u>		<u>Mute of Sound (MOS)</u>						<u>M&E</u>	
				MO S	MO S	MO S	MO S	MO S	MO S	Lo	Ro	MO S	MO S	MO S	MO S	MO S	MO S	Lo	Ro

AUDIO PRO TOOLS SESSIONS

Should Disney require separate audio stems/mix(es) to be delivered. The preferred format is ProTools sessions delivered via Media Monorail or Faspex.

The Home 5.1 and stereo audio studio deliverables are packaged via standardized Pro Tools sessions. These include flattened audio WAV files for each Pro Tools track, and are arranged in a way to allow for easier interoperability between facilities and downstream workflows.

The below sessions include both the studio production deliverables, and the QC approved assets that will go into studio inventory.

Home 5.1 and 2.0 Stems Supersession (Pre Augmentation)

This deliverable is only applicable when the production facility and the augmentation facility are not the same.

This is an interim deliverable that will be used by a secondary facility to augment the audio.

Pro Tools Session	
Format	PTX
Software Version	Pro Tools Ultimate 2019.6 or higher
Timecode Start	09:57:30:00
Longplay	Yes
Plugins	Required*
Audio Essence	
Format	WAV (note: one WAV per Pro Tools track)
Sampling Rate	48 kHz
Bit Depth	24 bits
Audio Channels per Track	1
Audio Configuration	
	Home 5.1 Dialog Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Music Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Effects Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Additional Stem (if applicable)
	Home 2.0 Dialog Stem (Lo, Ro)
	Home 2.0 Music Stem (Lo, Ro)
	Home 2.0 Effects Stem (Lo, Ro)
	Home 2.0 Additional Stem (if applicable)

*Note: All Pro Tools Plugins that are necessary to recreate any vocal effects or creative processing are required to be included with this supersession for augmentation and localization purposes. Their settings can be provided via screengrab or descriptions.

Home 5.1 and 2.0 Stems Supersession (Post Augmentation)

Pro Tools Session File	
Format	PTX
Software Version	Pro Tools Ultimate 2019.6 or higher
Timecode Start	09:57:30:00
Longplay	Yes
Plugins	Required*
Audio Essence	
Format	WAV (note: one WAV per Pro Tools track)
Sampling Rate	48 kHz
Bit Depth	24 bits
Audio Configuration	
	Home 5.1 Dialog Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Music Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Effects Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Filled Effects Stem (L, R, C, Lfe, Ls, Rs)
	Home 5.1 Additional Stem (L, R, C, Lfe, Ls, Rs) (if applicable)
	Home 5.1 Optional Stem (L, R, C, Lfe, Ls, Rs) (if applicable)
	Home 2.0 Dialog Stem (Lo, Ro)
	Home 2.0 Music Stem (Lo, Ro)
	Home 2.0 Effects Stem (Lo, Ro)
	Home 2.0 Filled Effects Stem (Lo, Ro)
	Home 2.0 Additional Stem (Lo, Ro) (if applicable)
	Home 2.0 Optional Stem (Lo, Ro) (if applicable)

**Note: All Pro Tools Plugins that are necessary to recreate any vocal effects or creative processing are required to be included with this supersession for augmentation and localization purposes. Their settings can be provided via screengrab or descriptions.*

Home 5.1 and 2.0 Printmaster Supersession

Pro Tools Session File	
Format	PTX
Software Version	Pro Tools Ultimate 2019.6 or higher
Timecode Start	09:57:30:00
Longplay	Yes
Plugins	Required*
Audio Essence	
Format	WAV (note: one WAV per Pro Tools track)
Sampling Rate	48 kHz
Bit Depth	24 bits
Audio Configuration	
	5.1 Domestic Printmaster (L, R, C, Lfe, Ls, Rs)
	2.0 Domestic Printmaster (Lo, Ro)
	5.1 Augmented Music & Effects (L, R, C, Lfe, Ls, Rs)
	2.0 Augmented Music & Effects (Lo, Ro)
	5.1 Optional Stem (L, R, C, Lfe, Ls, Rs) (if applicable)
	2.0 Optional Stem (Lo, Ro) (if applicable)

**Note: All Pro Tools Plugins that are necessary to recreate any vocal effects or creative processing are required to be included with this supersession for augmentation and localization purposes. Their settings can be provided via screengrab or descriptions.*

SUBTITLE SPECIFICATIONS

Subtitles may be requested to be created and provided in the following file format;

EBU-STL (.stl)

Preferred/Primary Disney Mezzanine Subtitle Format. When providing EBU-STL files they must comply with EBU TECH. 3264-E (1991) and conform (with the accurate timecode and timebase) to the primary video bed.

<https://tech.ebu.ch/docs/tech/tech3264.pdf>

Technical Requirements	
Format	EBU-STL (TECH 3264-E)
File Extension	stl
Frame Rate	As source
Display Standard Code	Open Subtitling

Lambda CAP (.cap)

When providing Lambda CAP files they must comply with the Netflix specification and conform (with the accurate timecode and timebase) to the primary video bed.

<https://partnerhelp.netflixstudios.com/hc/en-us/articles/214807928-Lambda-Cap-Creation-Guide-v1-1>

Technical Requirements	
Encoding	Shift-JIS / UTF-8 with BOM / UTF-16
File Extension	cap
Frame Rate	As source
Display Standard Code	Open Subtitling

Subrip Text Based Subtitles (.srt)

Disney can accept SRT files should EBU-STL not be available.

Technical Requirements	
Format	Subrip Text SRT
File Extension	srt
Frame Rate	As source
Display Standard Code	Open Subtitling

Subtitle Placement

Subtitles should be anchored to the bottom center of the screen with center justified text. If there is already text burned into the picture at that location on-screen, the subtitle text should move to the top of the screen.

- Graphically localized BDN subtitles may require micro positioned placement on the screen. Disney Operations team(s) will provide direction if this is required.
- Subtitles shall not cover or be on top of any readable text on screen.
- Subtitles shall NOT be located in the matte or touch the matte of letterboxed material. The text should be at minimum of 2% above or below the letterbox matte.
- All text shall fall within the Safe Title Area (90% of width and height or centered 1728 x 972) per ST 2046-1:2009.

Delivery Checklist

Asset Type	Specification	Disney Contact for delivery	Required by:
VIDEO MASTER	Walt Disney Studios Acquisitions Specification Version 1.2	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery
AUDIO PRO TOOLS SESSION	Walt Disney Studios Acquisitions Specification Version 1.2	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery
SUBTITLES	Walt Disney Studios Acquisitions Specification Version 1.2	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery
FINAL DIALOGUE SCRIPTS	Each line of dialogue, any on-screen text (forced narratives) and any vocals/song lyrics must be time-coded to match the video master. Where dubbing and/or subtitling right are acquired, all translation rights and restrictions should be fully detailed. Where content is supplied dubbed, the final dubbing script should be supplied. This should also include translations of any on-screen text.	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery
MUSIC CUE SHEETS	Particulars of all music synchronized with the picture as follows: title, composers, publisher, composer affiliations, how used, and timings	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery
LEAD SHEETS	Full score and lyrics for any song. Required where dubbing and/or subtitling rights are acquired.	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery
DISNEY + METADATA TEMPLATA	Local_Territory_D+Metadata_Template.xlsx	Melissa.Piazza@disney.com	At the same time as Video delivery
ART WORK	Per Schedule F (Marketing Assets) - Mandatory Assets and Additional Assets	Paul Marz (paul.marz@disney.com) Natalie Stemper (natalie.stemper@disney.com)	At the same time as Video delivery
Dubbing Credits	Licensor shall also deliver separate written details of Dubbing Contributors (Translator, Adaptor and credited voice over artists) for all delivered dubbed versions	EMEA.DL-MEDIA.DPlusAcquire@disney.com	At the same time as Video delivery