NAME

make_prores -- Generate a ProRes 422 or ProRes 4444 file

SYNOPSIS

make_prores -i *input_path* **-o** *output_file*
make_prores -h | -x

DESCRIPTION

Bash_AVpres is a collection of Bash scripts for audio-visual preservation. One of these small programs is **make_prores**. It encodes a video file or a folder containing single images into a ProRes 422 or 4444 stream and muxes it into a Matroska (".mkv" file), Material eXchange Format (".mxf" file) or QuickTime (".mov" file) container.

This script should work correctly with Bash from version 3.2 (released back on 2006-10-11), however we strongly advise using the current version 5.3.9 (released on 2025-12-10).

OPTIONS

BASIC OPTIONS

-i *input_path***, --input=***input_path*

input_path is a file if the content is stream based, or a folder if the content is single-image based

When a folder is passed, the script extracts the regular expressions ("regex") for processing all the files and determines the actual number of the first frame. The naming must follow one of the two formats:

path/to/filename_digits.extension
path/to/digits.extension

where *digits* is the numbering, which must be either alone or at the end of the filename, divided by an underscore from the rest of the filename and by a period from the extension (the filename can contain other underscore signs). The numbering can start at any number, but all successive frames must be present, from the beginning to the end of the interval. This can be verified by using the **missing_files** script.

-o *output_file***, --output=***output_file*

output file

ADVANCED OPTIONS

The default arguments of the advanced options can be overwritten by the user. Please remember that any string containing spaces must be quoted, or its spaces must be escaped. To cancel a default argument use

--<option>='#'

--ffmpeg='/bin/ffmpeg'
path to the **ffmpeg** command

--ffprobe='/bin/ffprobe'
path to the **ffprobe** command

--ff_glo_opt='-y'
A possibly already existing output file is overwritten.

The following two input file default parameters are used only when single-image-based content is provided:

--f='image2'
Probably this parameter should never be modified. It forces the use of the image file demuxer for the input.

--framerate=*framerate*
The default frame rate for video is *25*. The standardised projection speed for sound films is *24* frames per second, which is the default value in **make_prores**. Silent films or amateur films have often a different projection speed, for example *18*.

Video codec options with their default parameters:

--c_v=(*prores*|*prores_aw*|*prores_ks*|*prores_videotoolbox*)
FFmpeg comes with two different ProRes encoders: *prores* or *prores_aw* and *prores_ks* which is the default. These have been reverse engineered, because Apple is unwilling to disclose its ProRes 4444 and 422 format families.

The hardware encoder *prores_videotoolbox* is supported if present.

--profile_v=*video_profile*
Possible values for the *prores_ks* and *prores_videotoolbox* implementations are:
5 = 4444xq = ProRes 4444 XQ
4 = 4444 = ProRes 4444
3 = hq = ProRes 422 HQ (default)
2 = standard = ProRes 422
1 = lt = ProRes 422 LT
0 = proxy = ProRes 422 Proxy

Either the number or the abbreviation are valid.

The formats ProRes RAW HQ and ProRes RAW, introduced by Apple in 2018, are supported from FFmpeg version 8.0 with Vulkan hardware acceleration.

--filter_v=''
This can be used, for example, to provide scaling and/or padding video filters.

Audio codec options with their default parameters:

--c_a='copy'
If no sound stream is present, then the **ffmpeg** parameter "-an" is used instead.

--filter_a=''
This can be used to provide audio filters.

Output file default parameters:

--suffix='_prores'
The suffix is inserted at the end of the filename, immediately before the period and the extension. If wished, a preceding underscore must be added.

--extension=(*mkv*|*mxf*|*mov*)
Possible containers are Matroska (the ".mkv" files), Material eXchange Format (".mxf") and QuickTime (".mov"). The extension must be given without the preceding period.

INFORMATIVE OPTIONS

-h, --help
display a help message

-x, --options
display the advanced options with their default arguments and indicate if a local configuration has been defined or not

NOTES

COMPATIBILITY

The FFmpeg's ProRes codec implementations have been back engineered. Therefore the resulting files are not the same that Apple's one would generate.

CONFIGURATION FILE

An external configuration file
${HOME}/.config/AVpres/Bash_AVpres/make_prores.txt

can be defined, allowing the script to import alternate default values for the following options:
ffmpeg_bin
ffprobe_bin
ff_glo_opt
f
framerate
filter_v
c_v
profile_v
filter_a
c_a
suffix
extension

Example:
framerate='18'
suffix=''
extension='mxf'

LOG FILES

Temporary log files are stored at
/tmp/AVpres/make_prores.XXXXXXXXXX

The log files can be used for debugging, for example by running **cat** on the address prompted with fatal error messages:

cat /tmp/AVpres/make_prores.*XXXXXXXXXX*

SEE ALSO

"ProRes" section of the "FFmpeg Codecs Documentation"
https://ffmpeg.org/ffmpeg-codecs.html#ProRes

Reto Kromer: "Video into ProRes" entry of the "FFmpeg Cookbook for Archivists", since 2013
https://avpres.net/FFmpeg/im_ProRes.html

Reto Kromer: "Image sequence into ProRes" entry of the "FFmpeg Cookbook for Archivists", since 2013

https://avpres.net/FFmpeg/sq_ProRes.html

ffmpeg(1) and **ffprobe**(1).

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