How to handle variable frame rate
Posted by Timmorn - 06 Jun 2013 07:09

Hello,

I have found no clear answer to this although I thought this might be a common problem. My question is: What is the correct way to handle variable bit rate? Many devices nowadays produce videos with a variable framerate. But when I wanted to import such a video to Lightworks I saq immediately that it makes problems: The audio channel was shorter than the video channel... so out of sync. I think the problems will go on with further cutting / exporting.

Thanks

Timmorn

Re: How to handle variable frame rate
Posted by sennahojx - 06 Jun 2013 15:23

If you mean framerate, you should be able to work with different framerates in a 24fps project.

Re: How to handle variable frame rate
Posted by Timmorn - 06 Jun 2013 15:31

Yes, you are right. If have edited it. No, with 24 fps it is exactly the same. Do you really talk of a variable framerate within one video? This is what I have and this is what devices like Android or iPhone deliver nowadays.

Re: How to handle variable frame rate
Posted by shaunthesheep - 06 Jun 2013 15:43

I am just working with some iPhone shots and it uses variable frame rate. The free Mediainfo tool reports it as shown below. As can be seen, although the frame rate mode is variable, it also states that the frame rate is 29.97 fps. Lightworks analyses the files as 29.97 fps and treats them as such. It doesn't seem to make much difference that the frame rate is variable--at least I haven't noticed any problems. I just regard it as a 29.97 fps project.
General
Complete name : P:Lightworks test files and manuals\iphone images and movies\MG_0214.MOV
Format : MPEG-4
Format profile : QuickTime
Codec ID : qt
File size : 22.0 MiB
Duration : 8s 453ms
Overall bit rate : 21.8 Mbps
Writing application : 6.1.3
Writing library : Apple QuickTime
Model : iPhone 4S
Make : Apple
com.apple.quicktime.make : Apple
com.apple.quicktime.software : 6.1.3
com.apple.quicktime.model : iPhone 4S

Video
ID : 1
Format : AVC
Format/Info : Advanced Video Codec
Format profile : Baseline@L4.1
Format settings, CABAC : No
Format settings, ReFrames : 1 frame
Format settings, GOP : M=1, N=30
Codec ID : avc1
Codec ID/Info : Advanced Video Coding
Duration : 8s 453ms
Source duration : 8s 475ms
Bit rate : 21.7 Mbps
Width : 1 920 pixels
Height : 1 080 pixels
Display aspect ratio : 16:9
Rotation : 180°
Frame rate mode : Variable
Frame rate : 29.970 fps
Minimum frame rate : 28.571 fps
Maximum frame rate : 30.000 fps
Color space : YUV
Chroma subsampling : 4:2:0
Bit depth : 8 bits
Scan type : Progressive
Bits/(Pixel*Frame) : 0.349
Stream size : 21.8 MiB (99%)
Source stream size : 21.9 MiB (100%)
Title : Core Media Video
Color primaries : BT.709
Transfer characteristics : BT.709
Matrix coefficients : BT.709

Audio
ID : 2
Re: How to handle variable frame rate
Posted by Timmorn - 06 Jun 2013 15:46

This are the informations to my video file. Your framerate seems to be much more constant than mine:

Allgemein
Format : MPEG-4
Format-Profil : Base Media
Codec-ID : isom
Gesamte Bitrate : 8 808 Kbps

Video
ID : 1
Format : AVC
Format/Info : Advanced Video Codec
Format-Profil : Baseline@L3.1
Format-Einstellungen für CABAC : Nein
Format-Einstellungen für ReFrames : 1 frame
Format_Settings_GOP : M=1, N=30
Codec-ID : avc1
Codec-ID/Info : Advanced Video Coding
Dauer : 1min 36s
Bitrate : 8 864 Kbps
Breite : 1 280 Pixel
Höhe : 720 Pixel
Bildseitenverhältnis : 16:9
Modus der Bildwiederholungsrate : variabel
Bildwiederholungsrate : 25,761 FPS
minimale Bildwiederholungsrate : 1,454 FPS
maximale Bildwiederholungsrate : 50,420 FPS
ColorSpace : YUV
ChromaSubsampling : 4:2:0
Re: How to handle variable frame rate
Posted by shaunthesheep - 06 Jun 2013 15:55

What frame rate does the Lightworks Import Tool analysis state? 25 fps? I would try setting up a project with whatever frame rate it identifies it to be.

An alternative: I had 180 degree rotation problem with my files and had to batch re-encode the files using MPEG Streamclip. This got rid of the variable frame rate.

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Re: How to handle variable frame rate
Posted by Timmorn - 06 Jun 2013 15:57

What frame rate does the Lightworks Import Tool analysis state? 25 fps? I would try setting up a project with whatever frame rate it identifies it to be.

An alternative: I had 180 degree rotation problem with my files and had to batch re-encode the files using MPEG Streamclip. This got rid of the variable frame rate.
Yes, 25 fps. But this is with what I started. Result: audio and video out of sync.

Thanks

Timmorn

Re: How to handle variable frame rate
Posted by Greg_E - 06 Jun 2013 17:05

I'm in the middle of rejecting some POV cameras because of variable frame rate, the average never hits any of the standards, but the manufacturer thinks this is OK. Had to give a lecture about having standards for a reason.

The only real fixes are to resync the audio every time it goes out, and or buy a better camera that gives you real constant frame rates.

Re: How to handle variable frame rate
Posted by Timmorn - 07 Jun 2013 10:00

Ok, so from the software side only a workaround can be done. Thanks, that is what I wanted to know.