Subject: Re: high quality videos with idlffvideowrite? Posted by David Fanning on Wed, 24 Apr 2013 21:19:56 GMT

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George.millward@yahoo.com writes:

- > Can anyone point me to some documentation on how to make a high quality
- > video with idlffvideowrite I'm sure Exelis put one together but, as is often the case, I can't find it.

>

> I can easily create videos with iflffvideowrite - but they are usually very horrible and compressed. I have replaced all of the ffmpeg .dll files as described in the reference manual and so I have lots of codecs and formats to work with... (I'm on windows7 btw)

>

> ...but I never seem to get anything other than a really poor quality movie. Surely this can't be that hard ?!?

I didn't have any trouble with movie quality in the two movies I made for the Coyote Gallery, but they are pretty simple. You can find the code I used and the movies themselves here:

http://www.idlcoyote.com/gallery/index.html#AVI_MOVIE

Cheers.

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: http://www.idlcoyote.com/

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: high quality videos with idlffvideowrite? Posted by George.millward on Wed, 24 Apr 2013 21:34:18 GMT

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On Wednesday, April 24, 2013 3:19:56 PM UTC-6, David Fanning wrote:

> George.millward@yahoo.com writes:

> >

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> Cheers.
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>
 David
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>
  David Fanning, Ph.D.
>
> Fanning Software Consulting, Inc.
  Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
>
  Sepore ma de ni thue. ("Perhaps thou speakest truth.")
```

David,

Yeh, both of your movies are fine - but what I'm trying to do is create HD quality (1920 * 1080) 30fps video in H.264 format. This should look essentially like HD quality tv - but all I'm managing to achieve is an .mp4 file which is about 2MB in size and absolutely horrible.

Subject: Re: high quality videos with idlffvideowrite? Posted by AndrewM on Wed, 24 Apr 2013 22:42:49 GMT

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Try out some different values for the BIT_RATE keyword of the AddVideoStream() function. The default value is 2000000- meaning the encoder will aim to squeeze every second of video into 250 kilobytes (2Mbps = 250KBps), even if it has to sacrifice some quality to do so. H.264 is pretty good, but squeezing ~62 million pixels into 250KB is still a tall order.

Since you've gone through the trouble of getting yourself H.264 support (good choice!), you might also try experimenting with the PRESET keyword as well. Most of the H.264 presets just set different priorities for the tradeoff between video quality and encoding speed- if you don't mind encoding taking a bit longer, you can get a little more quality with the slower presets. The lossless presets will guarantee absolutely perfect quality, but fewer video players support them (Windows Media Player doesn't, but VLC does), and the files can come out quite large- here, the BIT_RATE setting is ignored, and slower presets get you smaller files rather than better quality.

I did an experiment a while back to see how the different presets compared. The quality column is completely subjective to my eyeballs. Your experience may vary, depending on your video. (My apologies for how ugly this table is going to be if you're not viewing with a monospaced font.)

Preset	Time (s) Quality (/10) Size (KB)				
ultrafast	9	4	3941	, ,	
superfast	14	7	430	4306	
veryfast	21	7	4532	4532	
faster	36	7.5	4487	4487	
normal	36	7.5	448	4488	
fast	48	8	4553	4553	
default	54	8	4521		
medium	54	8	45	4532	
hq	89	8.5	4479		
slow	91	8.5	4483	3	
slower	157	9	446	4	
veryslow	307	9	4468		
max	796	9.5	445	54	
placebo	893	9.5	44	82	
lossless_ultrafast 14		1 1	0 129048		
lossless_fast 26		10	11	116800	
lossless_medium 47 10 102583				102583	
lossless_slow 80) 1	0 9	9142	
lossless_slower 113		13	10	97086	
lossless_max 460		30 °	10	96881	

Subject: Re: high quality videos with idlffvideowrite? Posted by George.millward on Wed, 24 Apr 2013 23:09:24 GMT View Forum Message <> Reply to Message

On Wednesday, April 24, 2013 3:07:42 PM UTC-6, george@yahoo.com wrote: > Hi there,
> ·
>
>
> Can anyone point me to some documentation on how to make a high quality
>
> video with idlffvideowrite - I'm sure Exelis put one together - but, as is often the case, I can't find
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>
>
>but I never seem to get anything other than a really poor quality movie. Surely this can't be that hard ?!?
>
>
>
> Cheers
>
>
>
> George.
Andrew

Thanks for your help. I was trying the presets - but i must have something wrong because 'lossless' was definitely still compressed.

Here's what i have:

vidStream = oVid.AddVideoStream(width, height, fps, codec='libx264', preset='slow')

Cheers

George.

Subject: Re: high quality videos with idlffvideowrite?
Posted by David Fanning on Wed, 24 Apr 2013 23:15:25 GMT
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George.millward@yahoo.com writes:

> Thanks for your help. I was trying the presets - but i must have something wrong because 'lossless' was definitely still compressed.

> Here's what i have:
> vidStream = oVid.AddVideoStream(width, height, fps, codec='libx264', preset='slow')
> is that the correct codec for H.264 ?

I was just thinking that a tutorial on this subject by someone who knew what they were doing would be immensely helpful. Maybe George (when he gets things sorted) or Andrew can help us out. I'd be happy to host the

Cheers.

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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tutorial on my web page. Or, even better, it could be the first entry to

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a new section in the IDL Documentation Center. :-)

Subject: Re: high quality videos with idlffvideowrite? Posted by AndrewM on Wed, 24 Apr 2013 23:29:41 GMT View Forum Message <> Reply to Message

Yup, libx264 is the one you want for H.264 encoding. Still, though, increasing BIT_RATE is the first thing to try. It's going to take a lot more than 2 Mbps to get good quality 1920x1080 video. Let me know if that doesn't work out.

Subject: Re: high quality videos with idlffvideowrite? Posted by David Fanning on Wed, 24 Apr 2013 23:50:22 GMT

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AndrewM writes:

> Yup, libx264 is the one you want for H.264 encoding. Still, though, increasing BIT_RATE is the first thing to try. It's going to take a lot more than 2 Mbps to get good quality 1920x1080 video. Let me know if that doesn't work out.

Here is a link that seems particularly useful in this regard:

http://bit.ly/jJ0ufx

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: http://www.idlcoyote.com/

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: high quality videos with idlffvideowrite?
Posted by George.millward on Wed, 24 Apr 2013 23:51:21 GMT
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On Wednesday, April 24, 2013 5:29:41 PM UTC-6, AndrewM wrote:

> Yup, libx264 is the one you want for H.264 encoding. Still, though, increasing BIT_RATE is the first thing to try. It's going to take a lot more than 2 Mbps to get good quality 1920x1080 video. Let me know if that doesn't work out.

Yes, i did try bit_rate and it does make a big difference. I guess I'd assumed that the h264 'presets' would override any stated bit rate.

I agree with David... this needs a tutorial, or a much more complete set of examples - these days HD is almost standard and (for instance) the iPad goes way beyond HD.