

Programs Required

Pismo File Mount Audit Package - <http://www.pismotechnic.com/pfm/>

AVFS Avisynth Virtual File System - <http://www.turtlewar.org/avfs/>

AVISynth 2.5.8 - <http://sourceforge.net/projects/avisynth2/files/AviSynth%202.5/>

Virtual Dub 1.9.11 - <http://virtualdub.sourceforge.net/>

CLOWNBD v0.79 - <http://www.clownbd.com/>

*FFdshow 3882 - <http://www.xvidvideo.ru/ffdshow-tryouts-project-x86-x64/ffdshow-tryouts-project-svn-3882-x86-x64.html>

*other ffdshow build may also work

Sonic Scenarist 3D 5.6 minimum - <http://www.sonic.com>

Sonic Cinevision 3.6 minimum - <http://www.sonic.com>

ChapterGen - <http://forum.doom9.org/showthread.php?t=150148>

Virtual clone drive - <http://www.slysoft.com/en/download.html>

MEGUI - <http://sourceforge.net/projects/megui/>

TSMUXER - <http://www.videohelp.com/tools/tsMuxeR>

*BioMvc - from here - <http://www.megaupload.com/?d=33H7R1SI>

INSTALL all of the above progs.

*Unzip the biomvc files somewhere with plenty of space.

We're going to be working with uncompressed AVI's. 2TB will be plenty for all movie lengths.

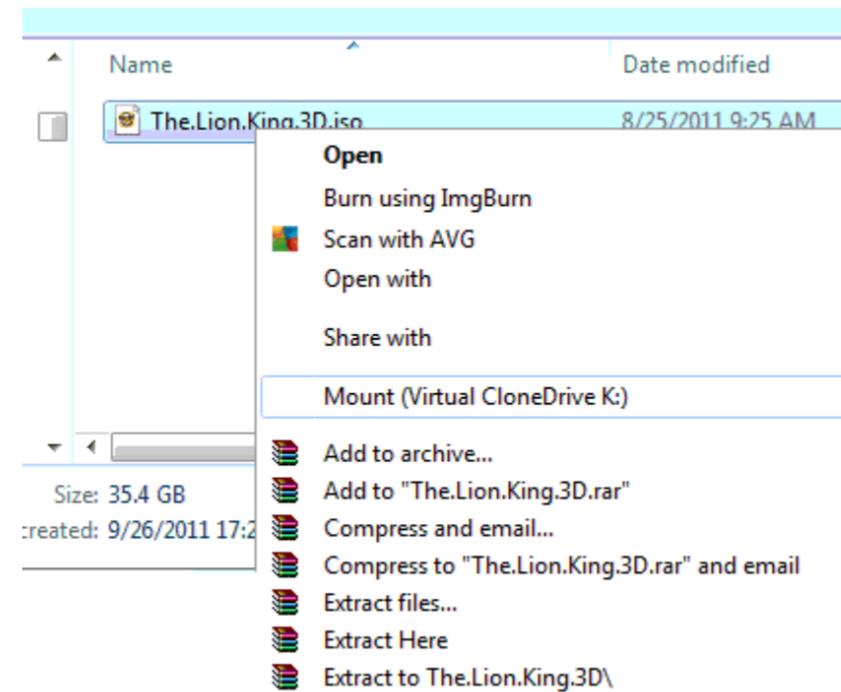
you will need to modify the biomvc files to match the drive/folder location you choose. In this example we're using D:\3d

Create a folder for your uncompressed avis also eg 3d_avis

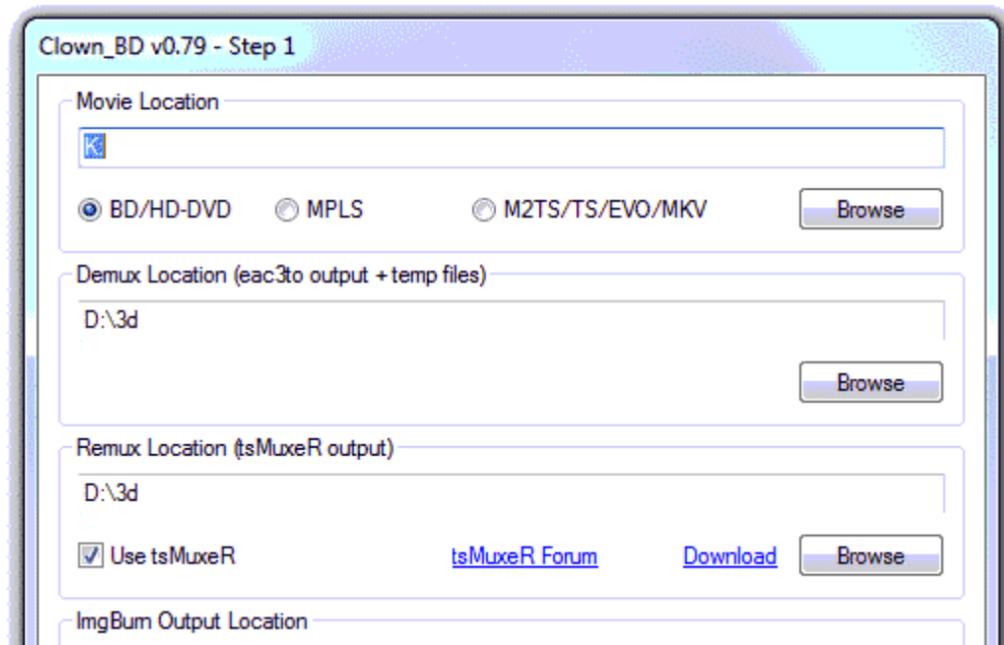
LETS GET STARTED

For this project im using The Lion King 3D

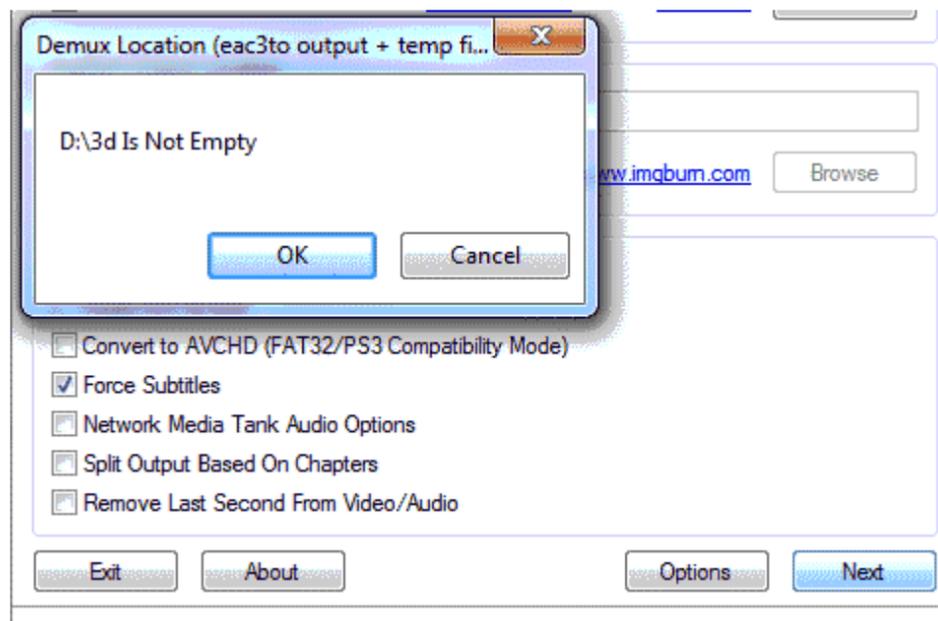
So you've ripped your disc to an ISO, you can now mount it using Virtual Clone Drive.



Open clon BD and set the Movie Location to that of your virtual drive and the demux/remux location to D:\3d

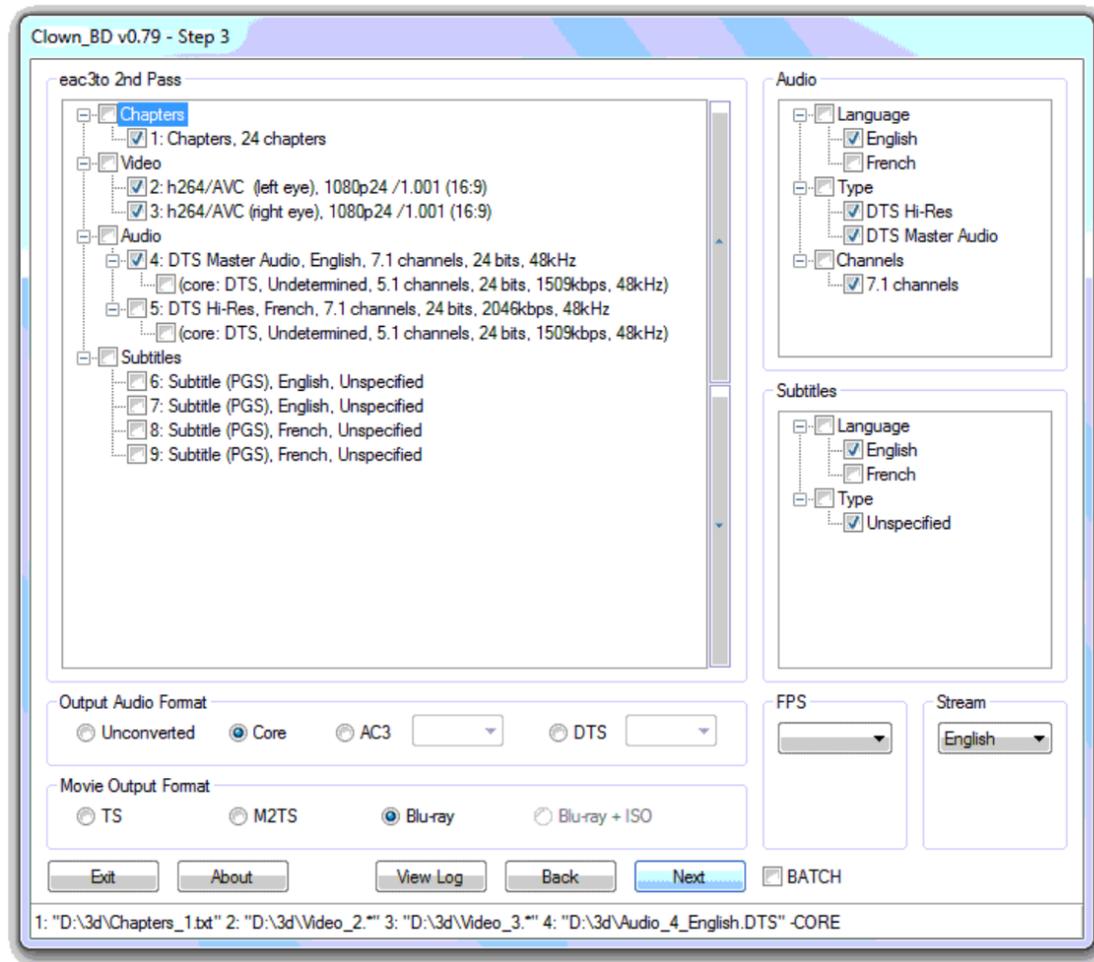


once done, click NEXT, a popup will tell you that D:\3d Is Not Empty. Click OK (its only those biomvc files)



clownBD will take a few seconds to do an analyse pass, then its time to select your video/audio streams to demux.

As were going to be re-encoding to bd25 you might want to select CORE as the Output Audio Format so you have more birate for the video streams



Click NEXT

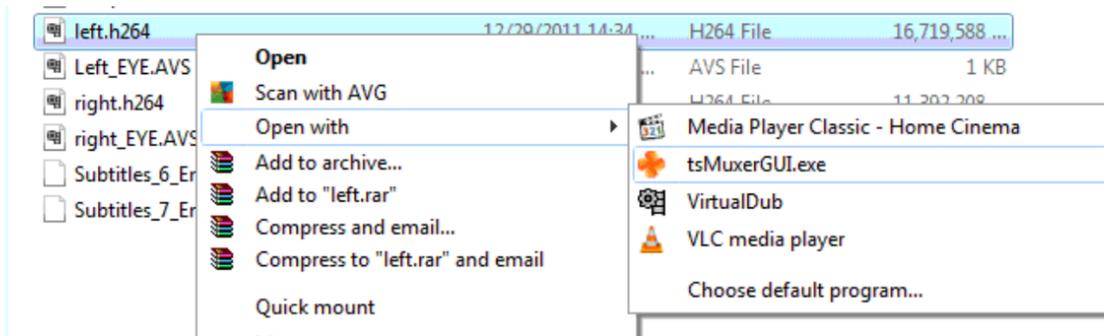
ClownBD will now demux the selected streams to D:\3d

after 10 minutes or so the files will be demuxed, it will report an error as it tries to remux them, just close clownBd and your now done with it.

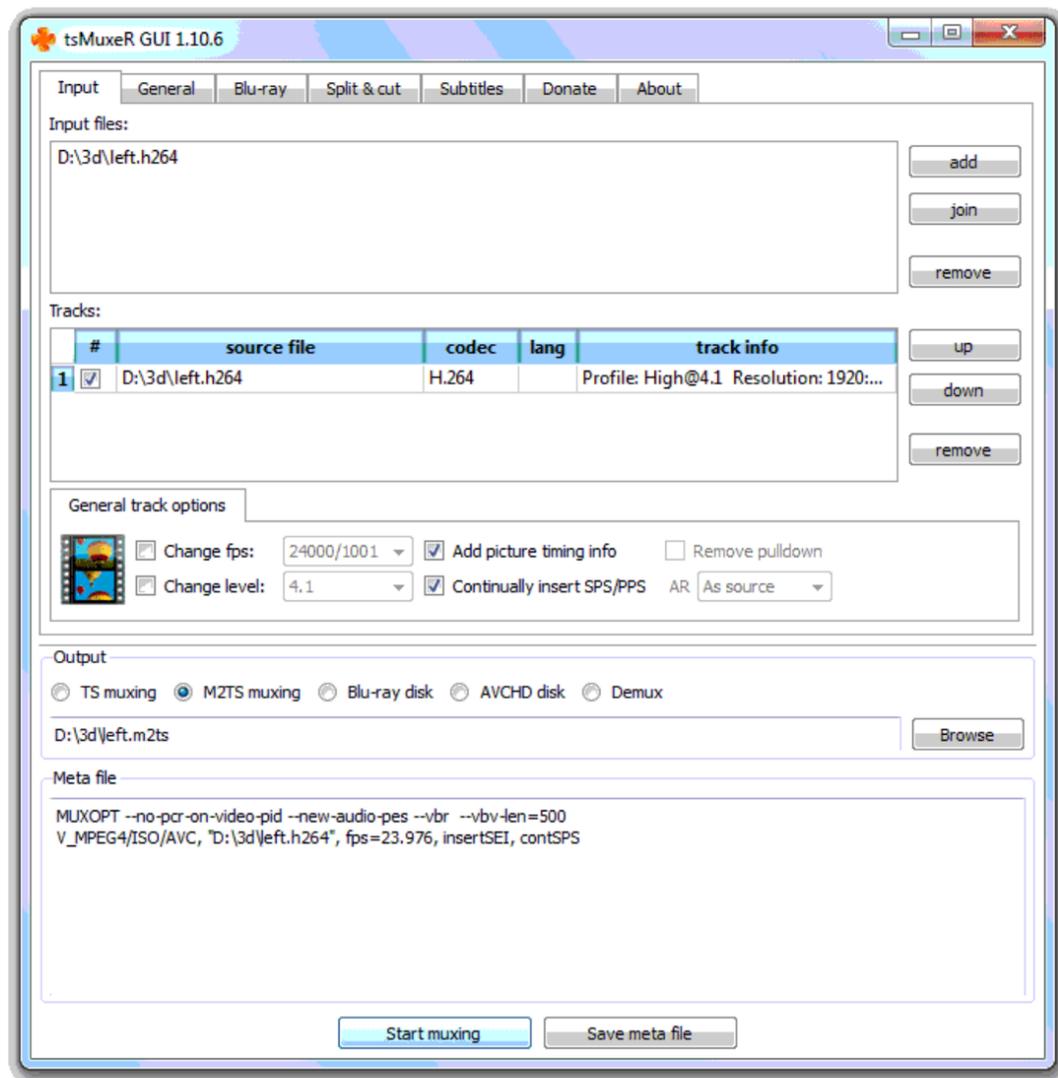
go to the D:\3d folder and rename the video streams to left.h264 and right.h264

the larger file is the base view the smaller is the dependant view.

now open the left.h264 with TSMUXERGUI



select M2TS muxing then Start muxing



When its done you can close it.

When clownBD demuxed the files it also created LOG files

Open eac3to_PASS3_LOG.LOG

and note how many frames the video file contain

Video track 2 contains 127815 frames.

Video track 3 contains 127815 frames.

Open the Left_EYE.AVS with notepad and enter the frame value from the eac3 log into it replacing the XXXXXXX

```
DirectshowSource("D:\3d\Left.m2ts", fps=23.976, framecount=XXXXXXXX, audio=false)
```

```
ConvertToYV12().AssumeFPS(24000,1001)
```

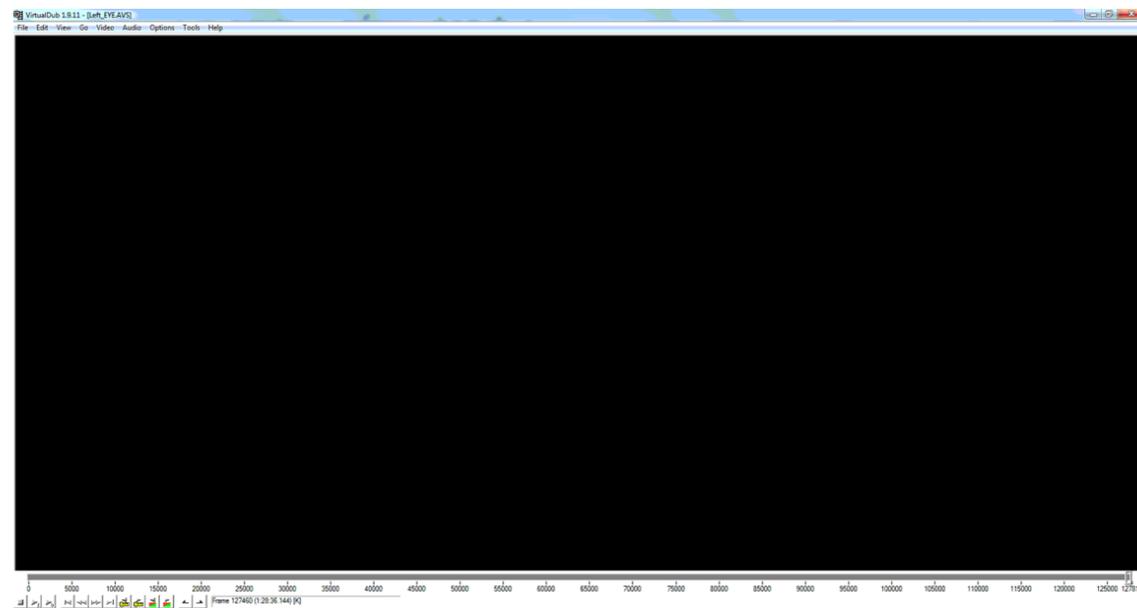
so it looks like this, then save.

```
DirectshowSource("D:\3d\Left.m2ts", fps=23.976, framecount=127815, audio=false)
```

```
ConvertToYV12().AssumeFPS(24000,1001)
```

Now open this avs file with Virtual dub. (FFdshow will then decode this in the background)

What we need to do is trim a few seconds off the end of the movie because Biomvc craps out before reaching the end. Its easier to set a nice cut point using the left eye stream as its much faster to decode than the right eye stream.I choosen a point right after the end credits, just before the Mickey Mouse steam boat logo appears giving me a frame count of 127460 frames. You could choose to cut the credits completely. Its up to you.



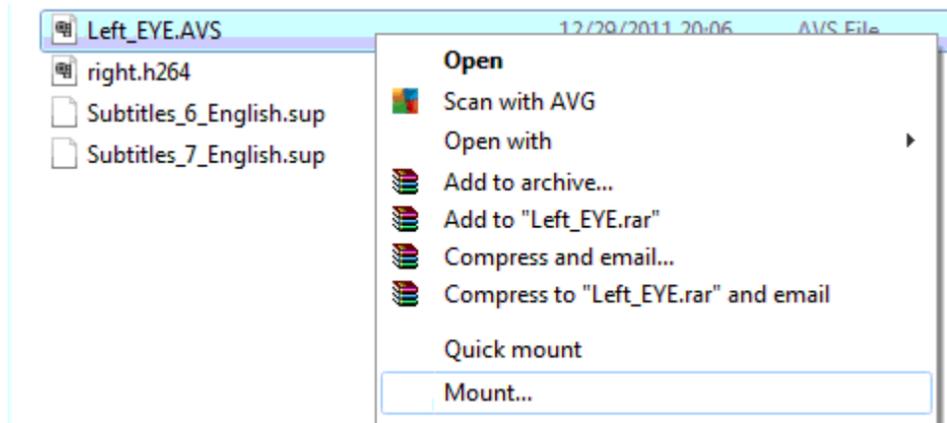
Close Virtual Dub

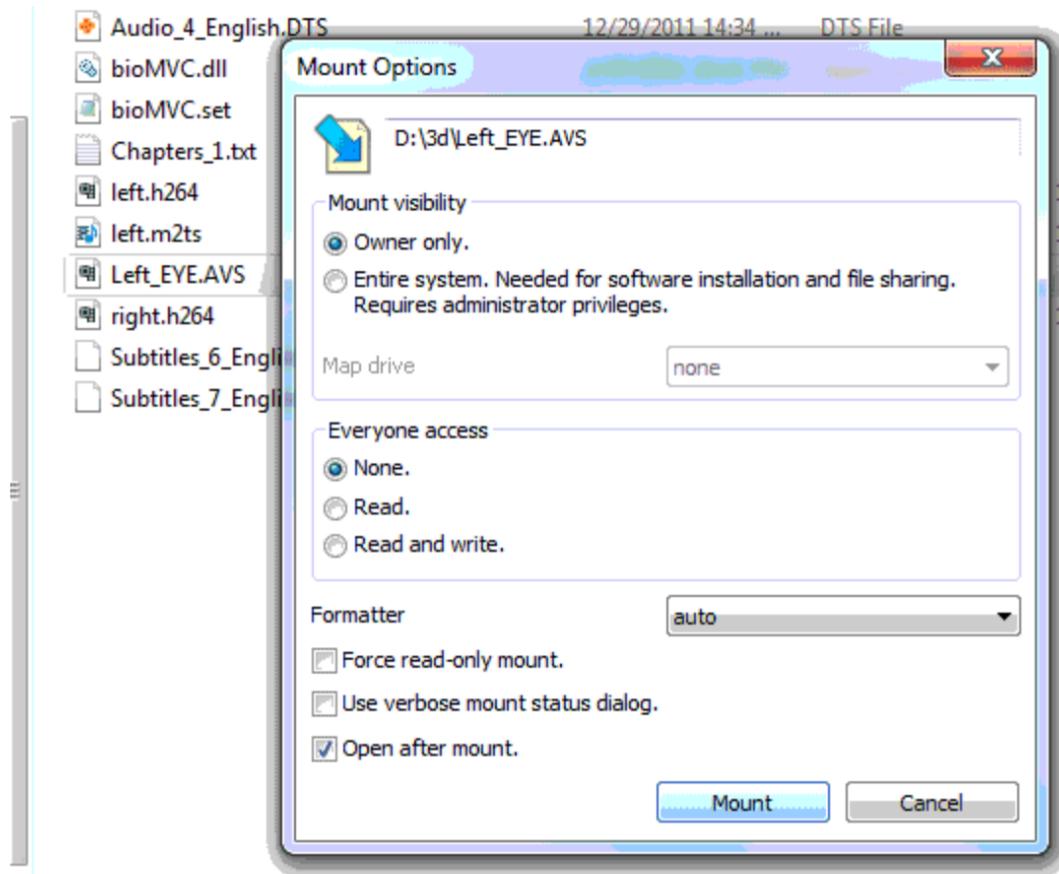
Open the Left_EYE.AVS file again and replace the original frame count with the trimmed count then save.

```
DirectshowSource("D:\3d\Left.m2ts", fps=23.976, framecount=127460, audio=false)
```

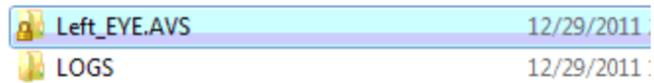
```
ConvertToYV12().AssumeFPS(24000,1001)
```

We now need to virtually mount the Left eye stream.

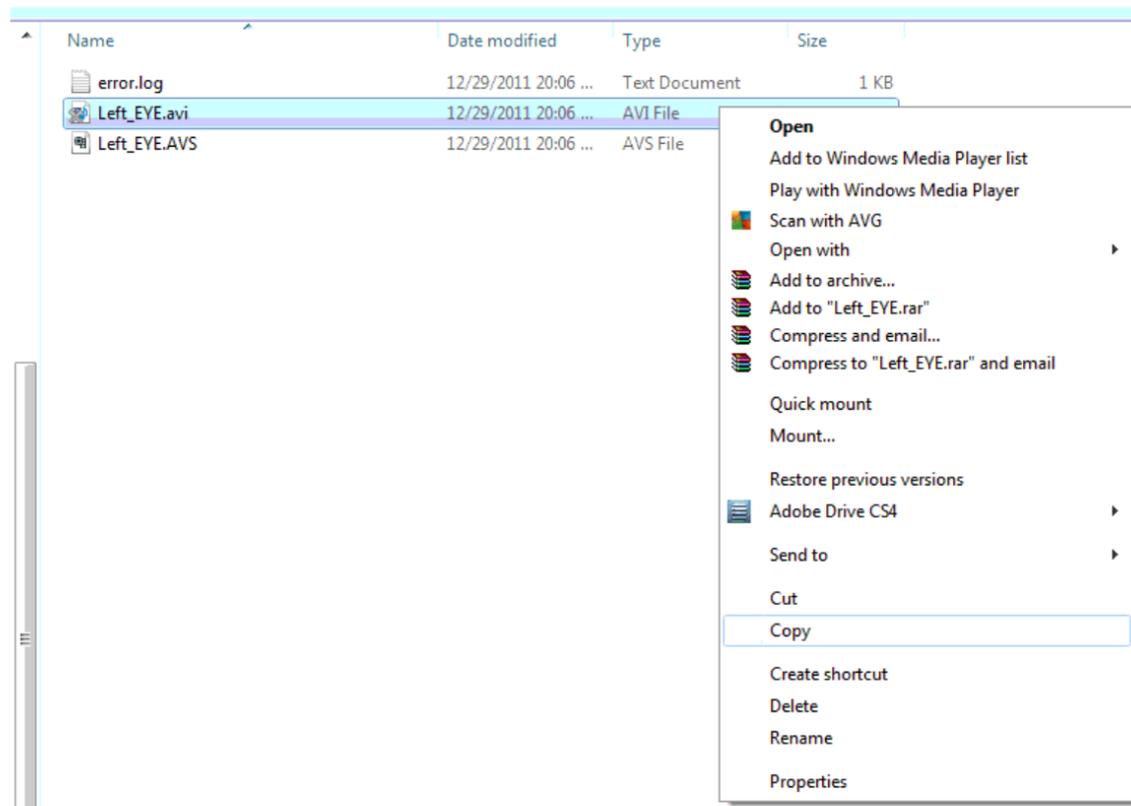




After mounting a new folder containing the virtual Left eye avi will be created.



Copy the avi file



Then paste it into the 3d_avis folder

it will take a while. PC spec will have a major effect on how long this takes.

when its finished the LEFT EYE IS READY FOR ENCODING. Now on to the right....

Open the right_EYE.AVS with notepad

```
LoadPlugin("D:\3d\bioMVC.dll")
```

```
right=bioMVCH264Plugin("D:\3d\bioMVC.set", xxxxxx).assumefps(24000, 1001)
```

```
comb=right
```

```
return comb
```

replace xxxxxx with the trimmed frame count used for the left eye stream

```
LoadPlugin("D:\3d\bioMVC.dll")
```

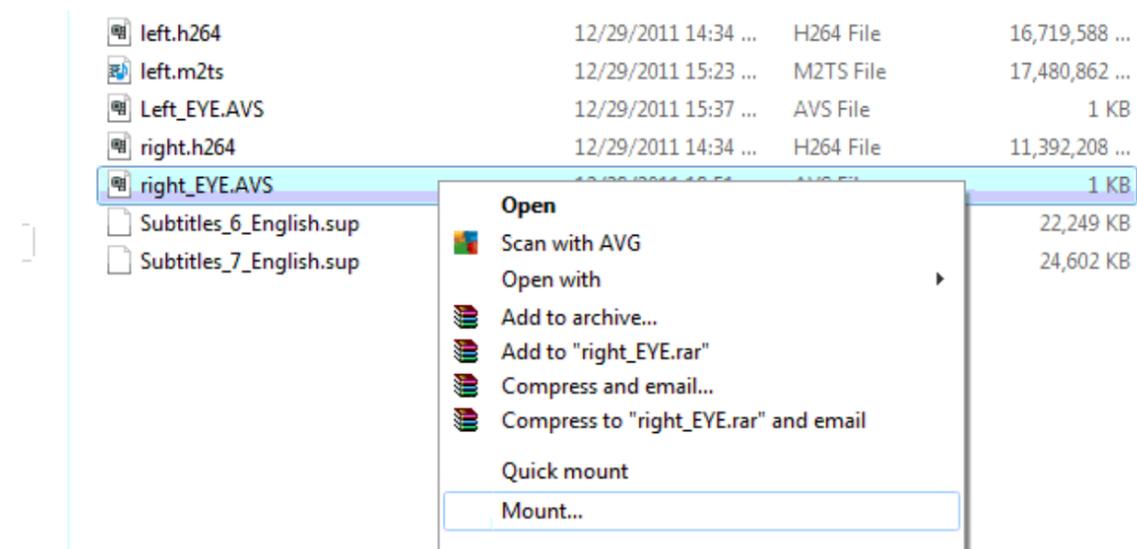
```
right=bioMVCH264Plugin("D:\3d\bioMVC.set", 127460).assumefps(24000, 1001)
```

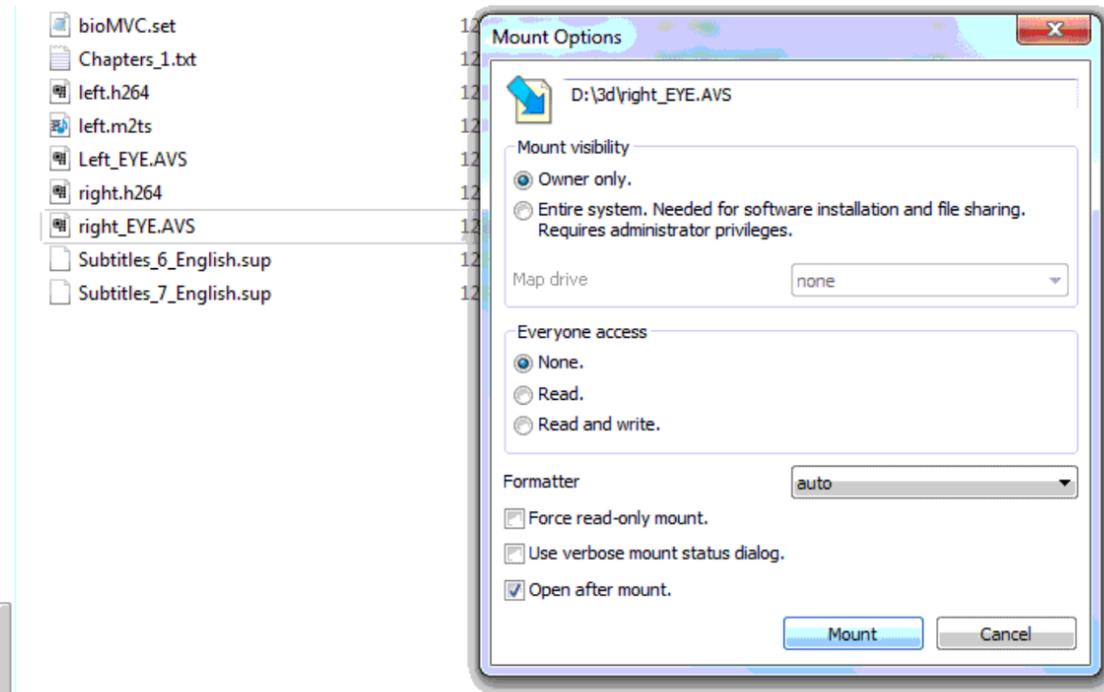
```
comb=right
```

```
return comb
```

then save.

We now need to virtually mount the right eye stream.

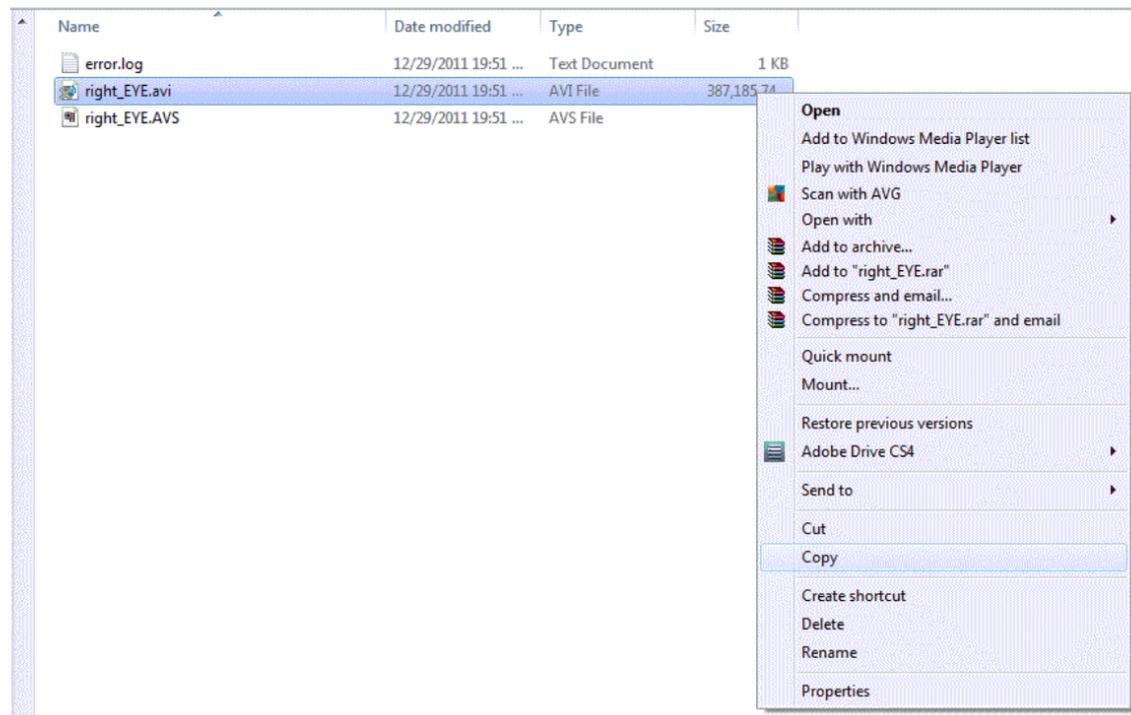




After mounting a new folder containing the virtual avi will be created, just like when you did the left eye mount.

| | |
|---------------|------------|
| LOGS | 12/29/2011 |
| right_EYE.AVS | 12/29/2011 |

O



Copy the avi file

then paste it into the 3d_avis folder

it will take a while, double the time it took for the left eye. PC spec will have a major effect on how long this takes.

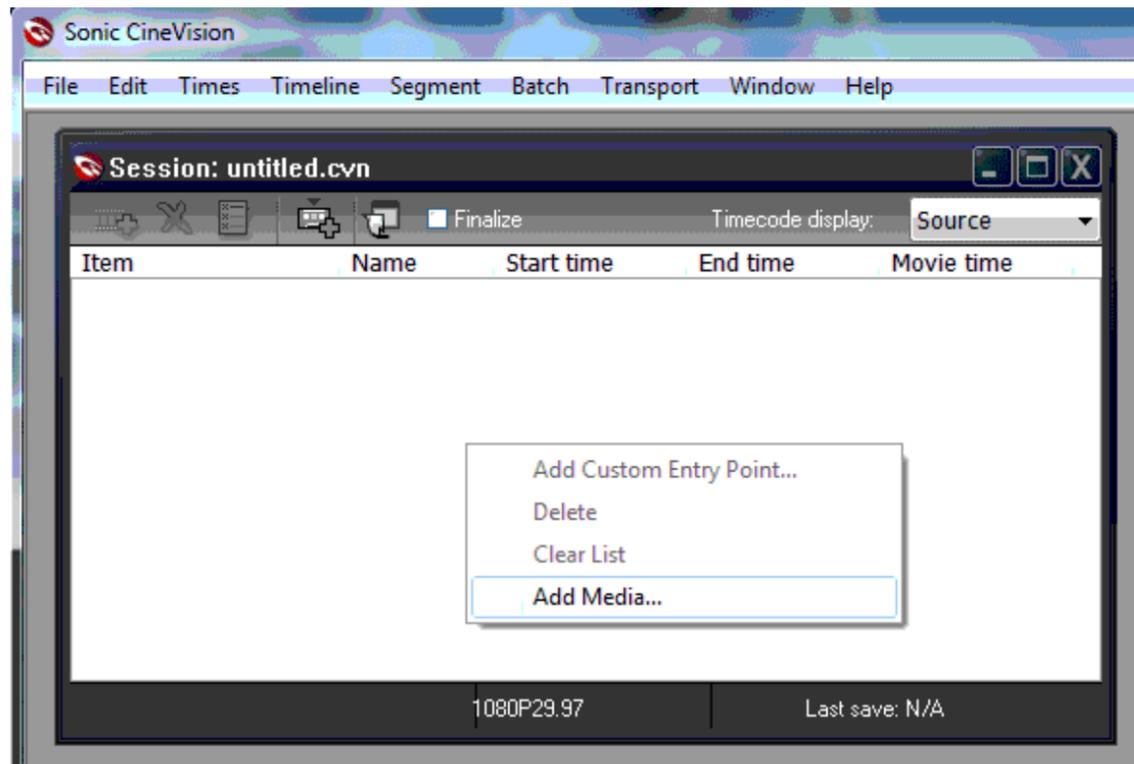
when its finished the RIGHT EYE IS NOW READY FOR ENCODING.

your streams will be the same frame count and file size if you have followed this guide correctly (hopefully)

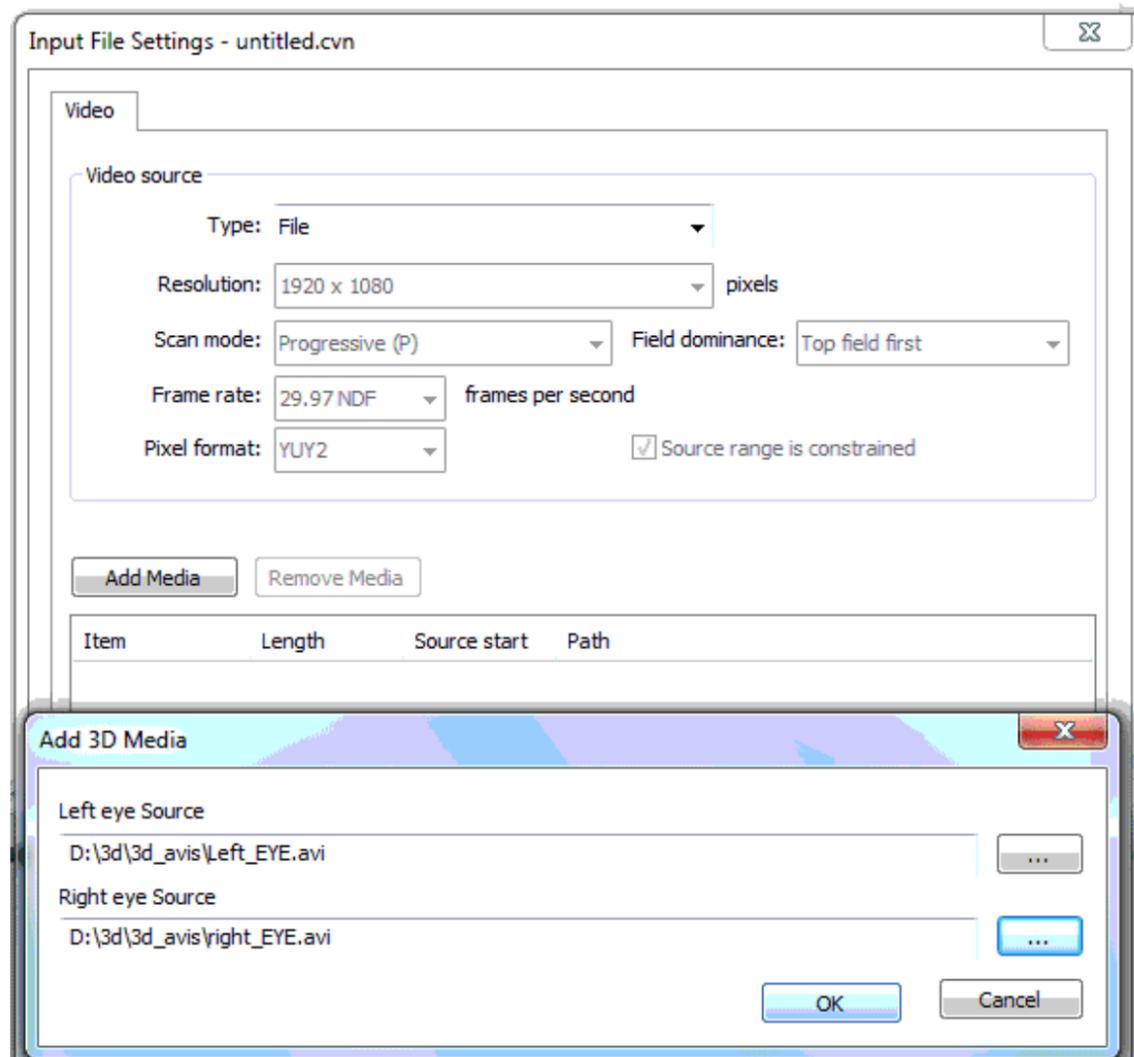
| Name | Date | Type | Size | Length |
|---------------|---------------------|----------|----------------|----------|
| Left_EYE.avi | 12/29/2011 20:06 PM | AVI File | 387,185,744 KB | 01:28:36 |
| right_EYE.avi | 12/29/2011 19:51 PM | AVI File | 387,185,744 KB | 01:28:36 |

NOW ONTO THE ENCODING

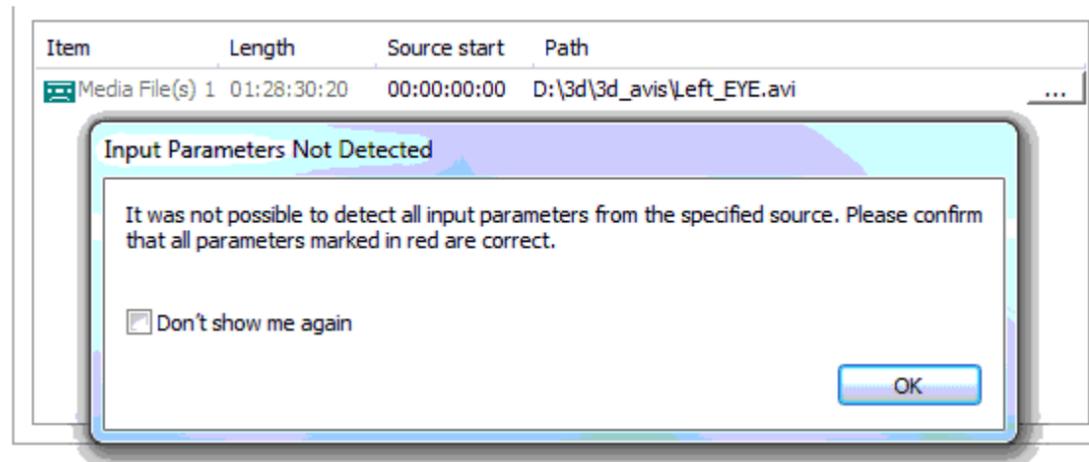
Open Cinevision then add your media files you have just created



Click Add Media and select your left and right streams

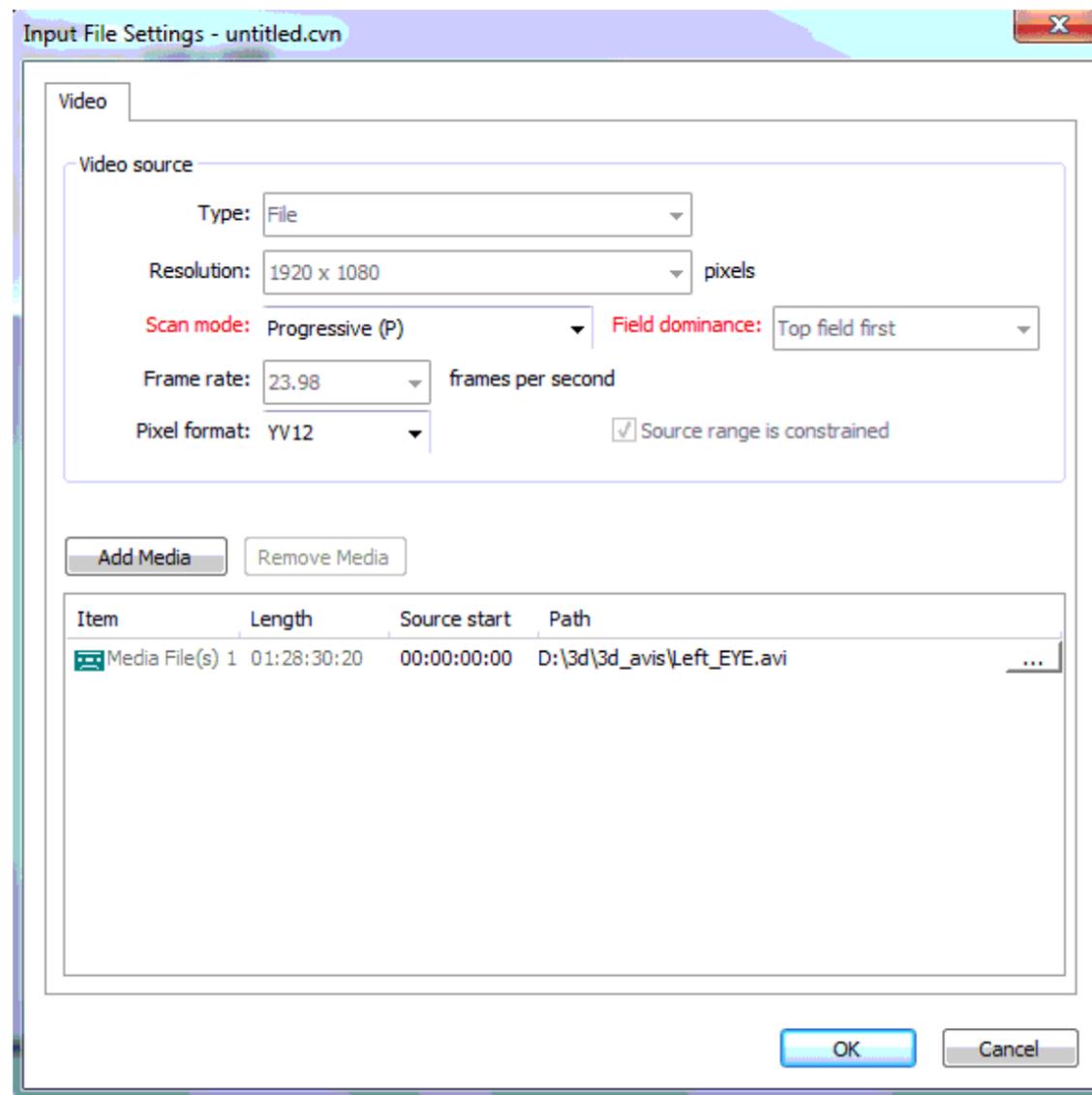


An input parameters not detected box will pop up



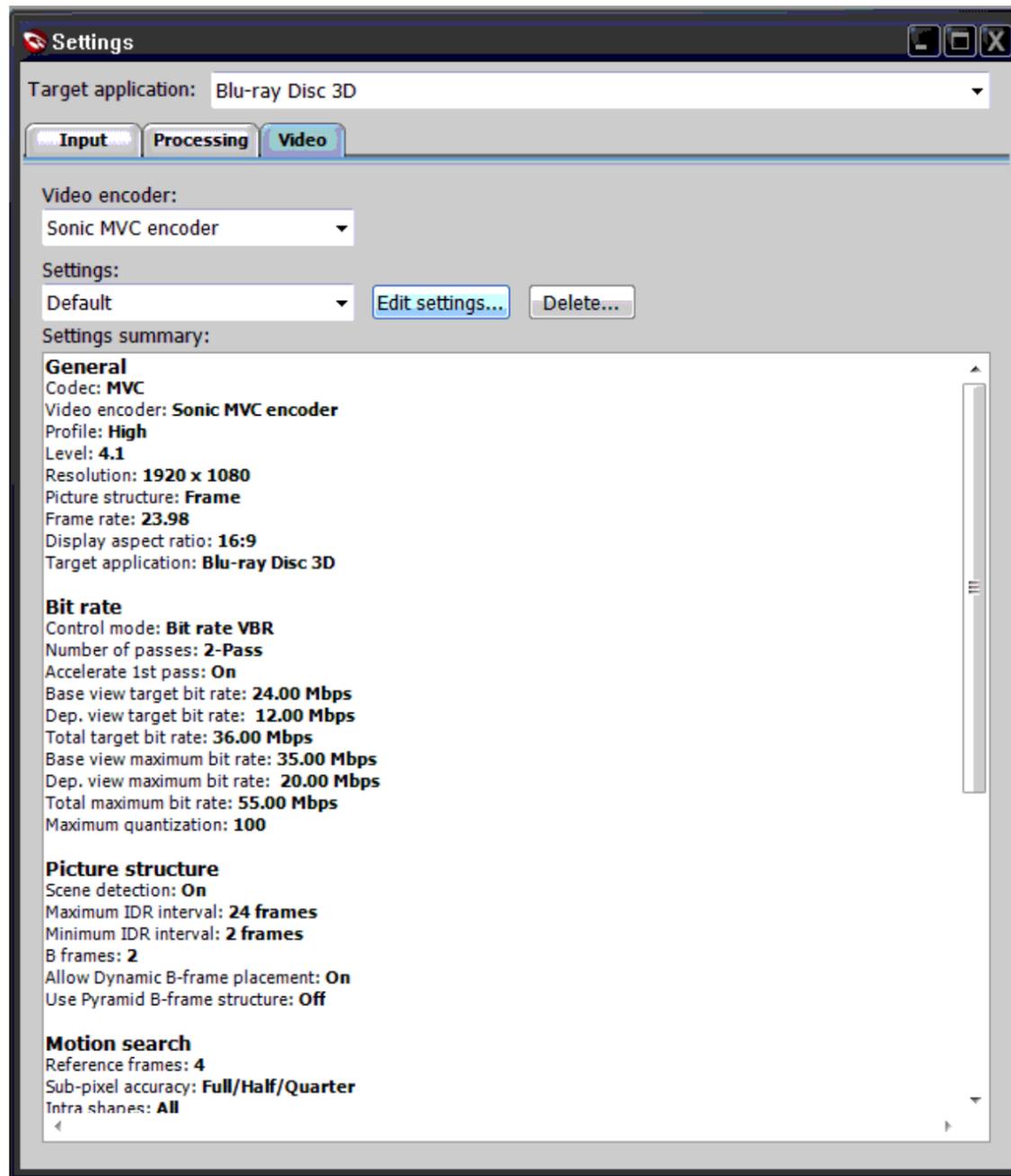
just click OK

Make sure Scan mode is set to Progressive and Pixel format is YV12



then click OK

On the settings window click on Video, then Edit settings...



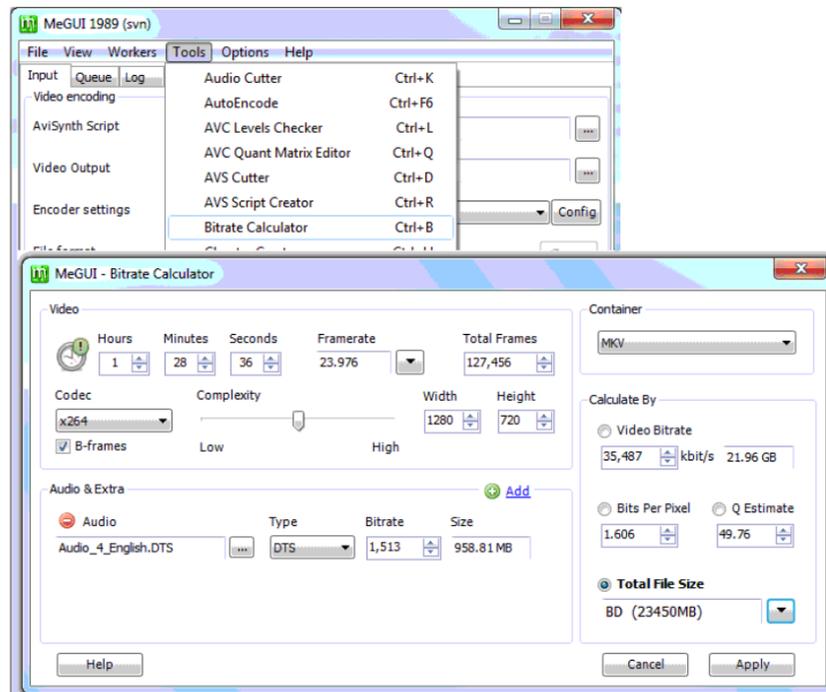
Then Bit rate.

We'll use MeGUI for this, so open than now.

select the TOOLS tab, then Bitrate Calculator tab

set the running time to match the video, load the demuxed audio track if your not sure of the bitrate of it.

select BD (23450MB) from the Total Filesize options. You will now see how much bitrate you have to play with for the video.

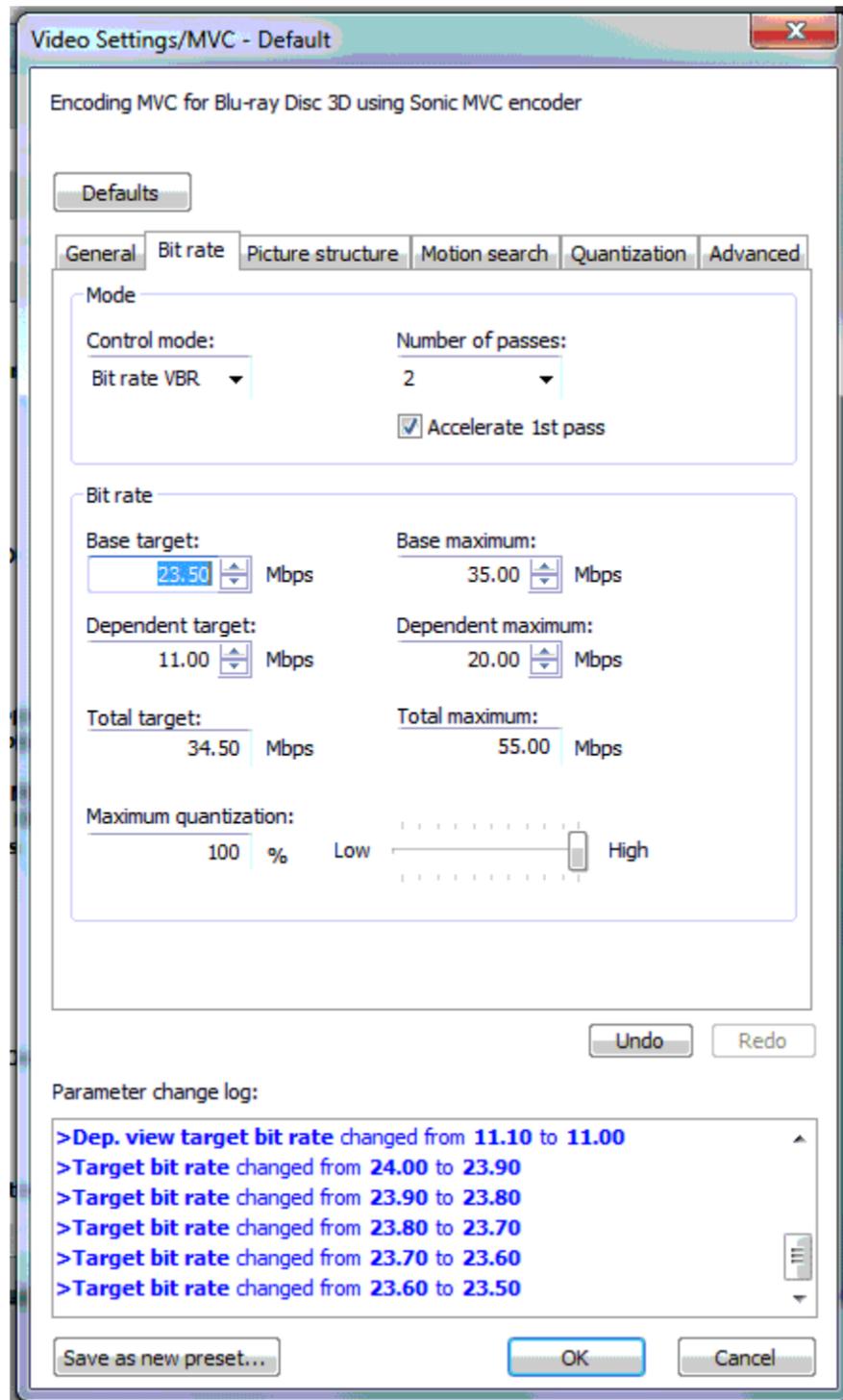


35,487 kbit/s.

Close Megui, were done with it.

You can now set the bitrate in cinevision

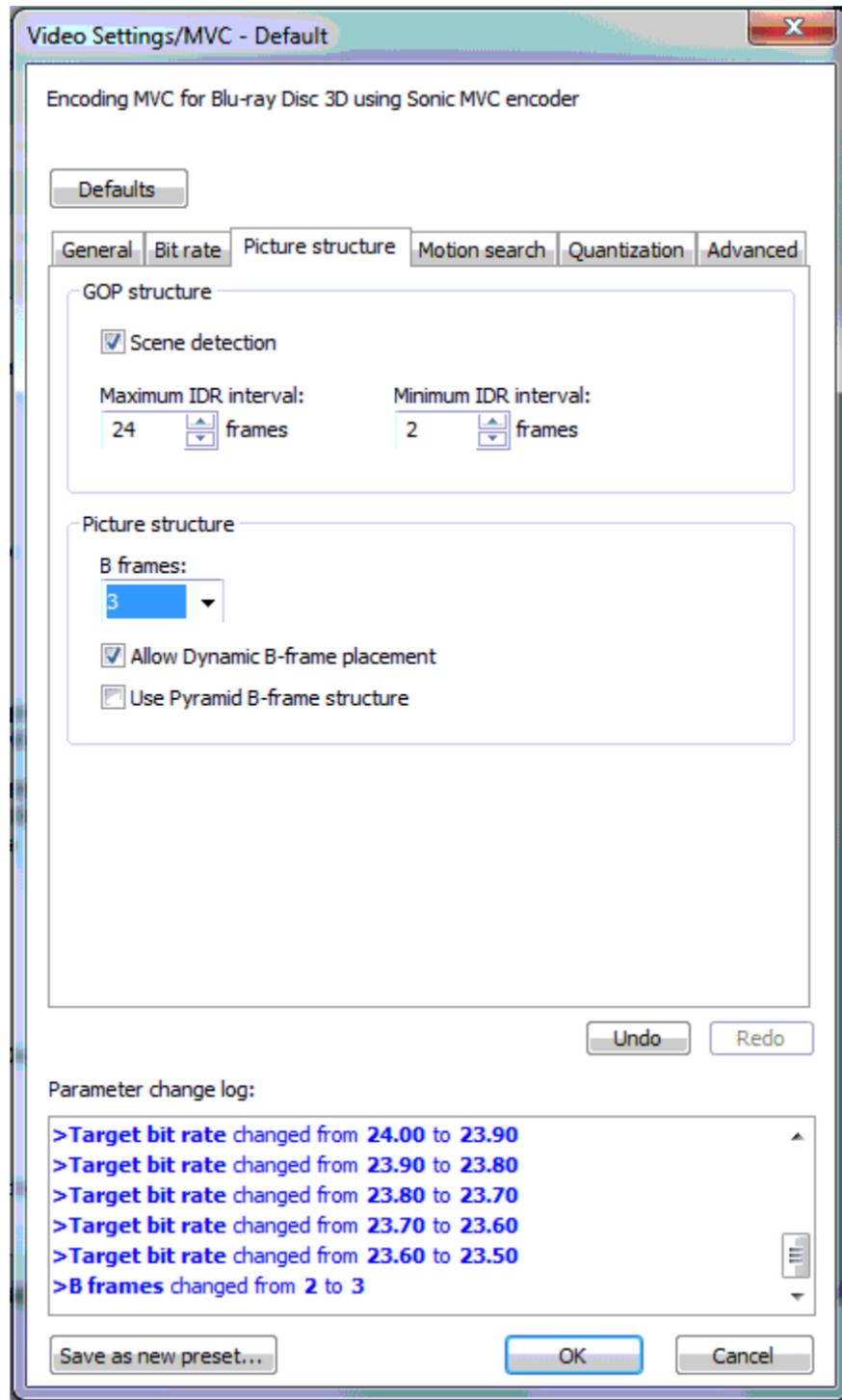
You have 35.5 mbit to play with.



Its upto you how you split it, i always hold some bitrate back in case of an over size or segment re-encoding.

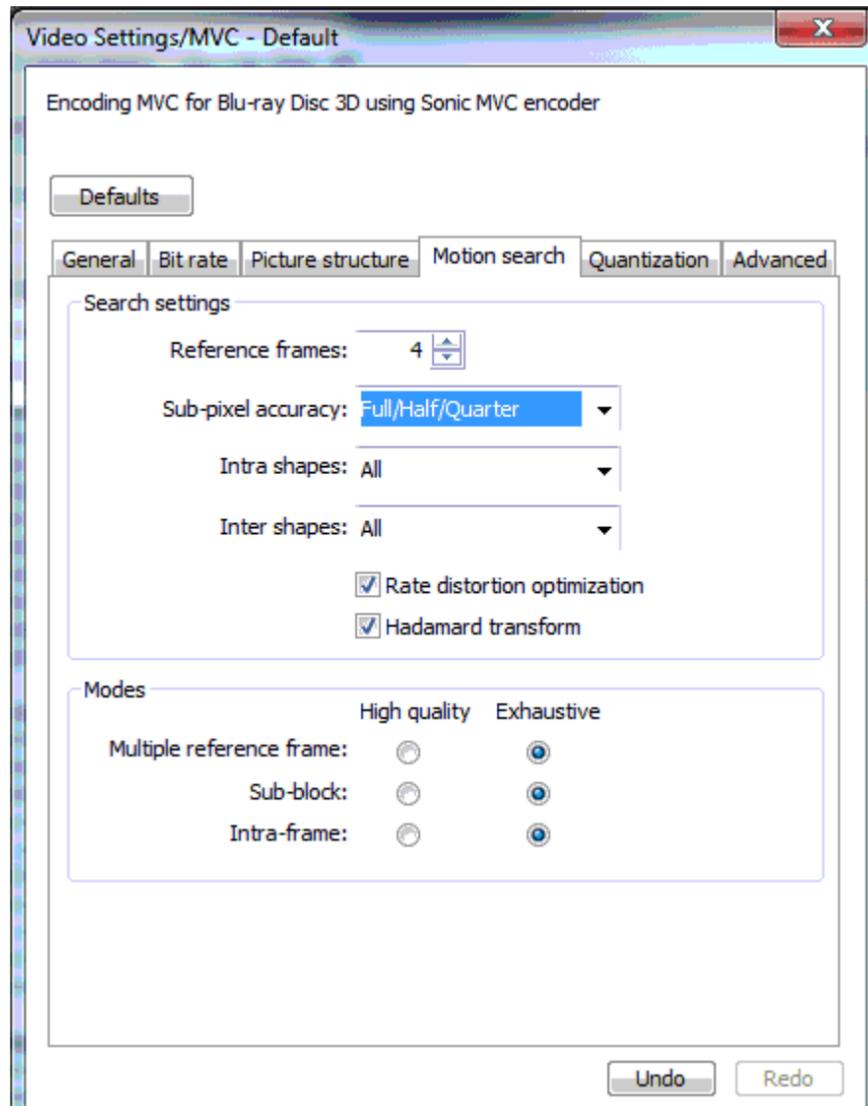
Now onto the Picture Structure tab

I change B frames to 3. Dont tick Use Pyramid B-frame structure as it will screw up the encode.



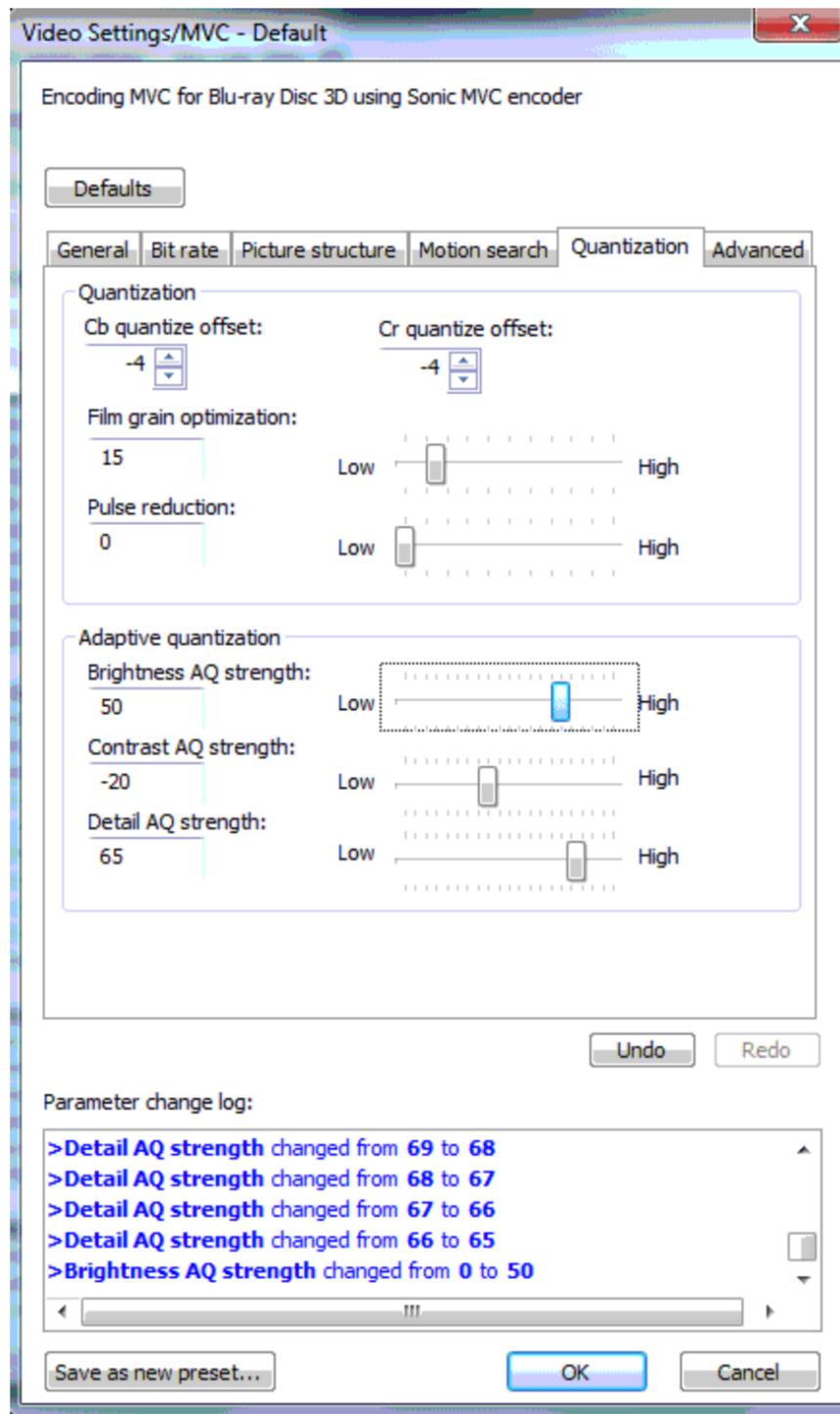
Now onto the motion Search tab.

I change the Reference Frames to 4 and the modes to Exhaustive here.

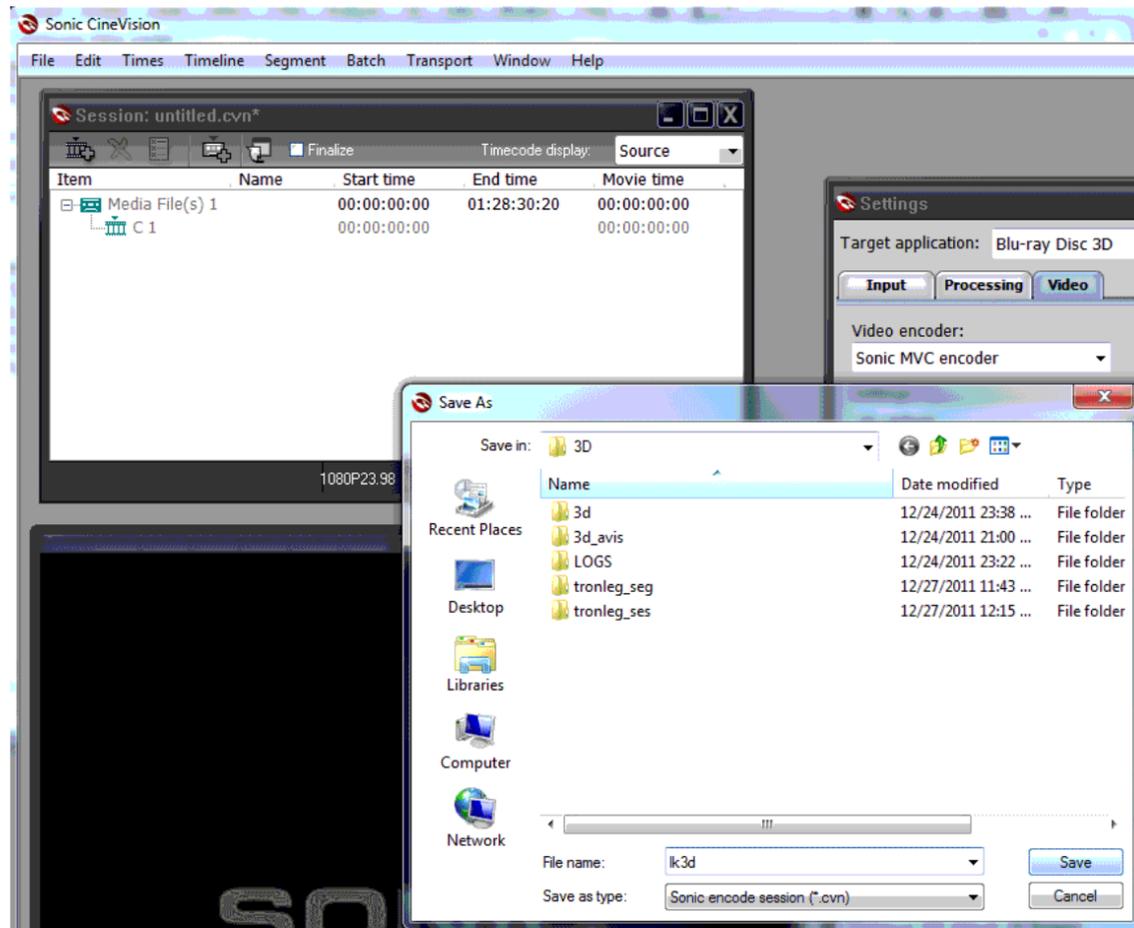


Now onto the Quantization tab.

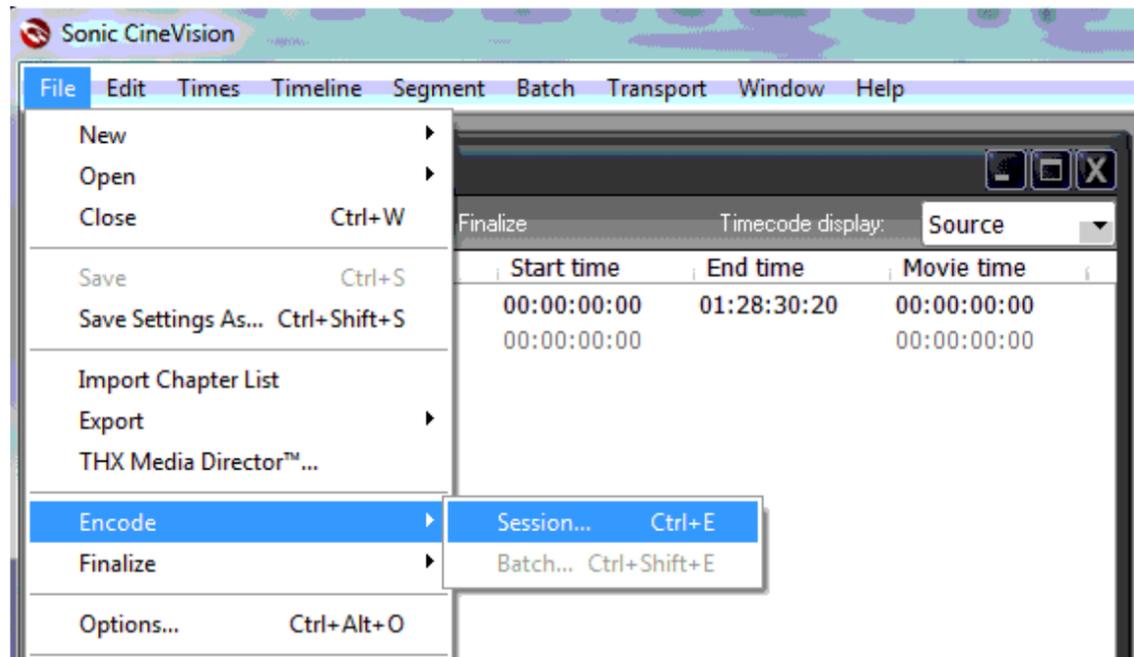
Im a noob when it comes to encoding setting so i use the cinevision help to get an idea of what each option does.



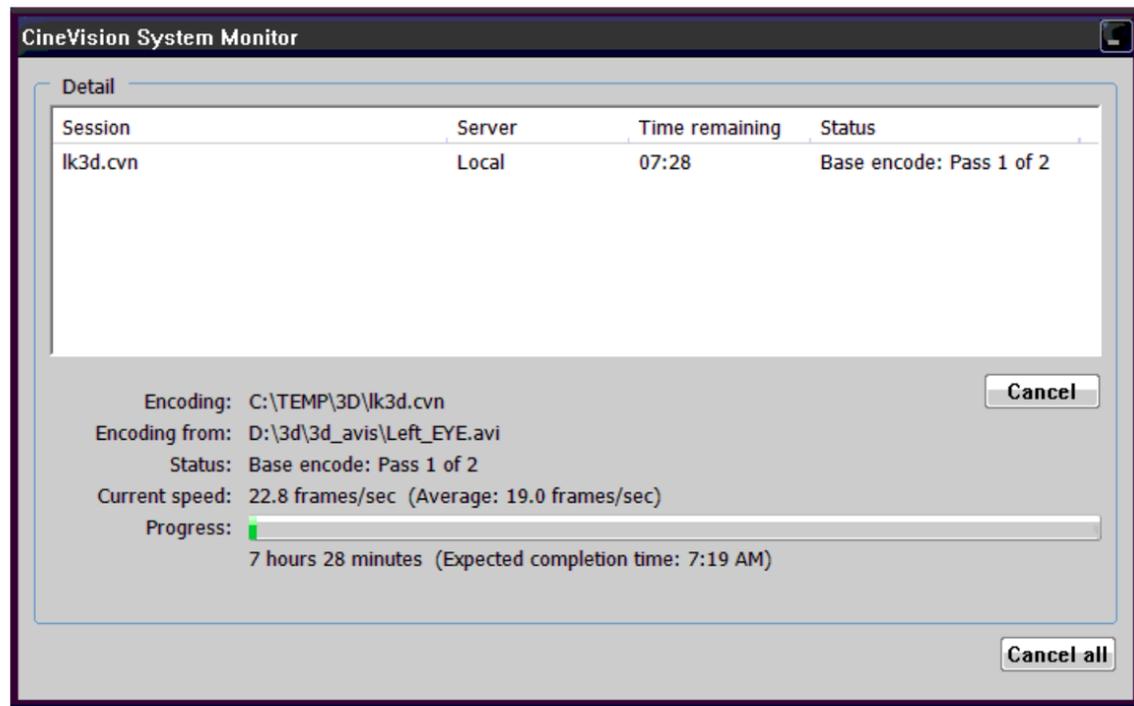
I leave the Advanced tab as is and just save as new preset, Cartoon etc.....
then save settings as....



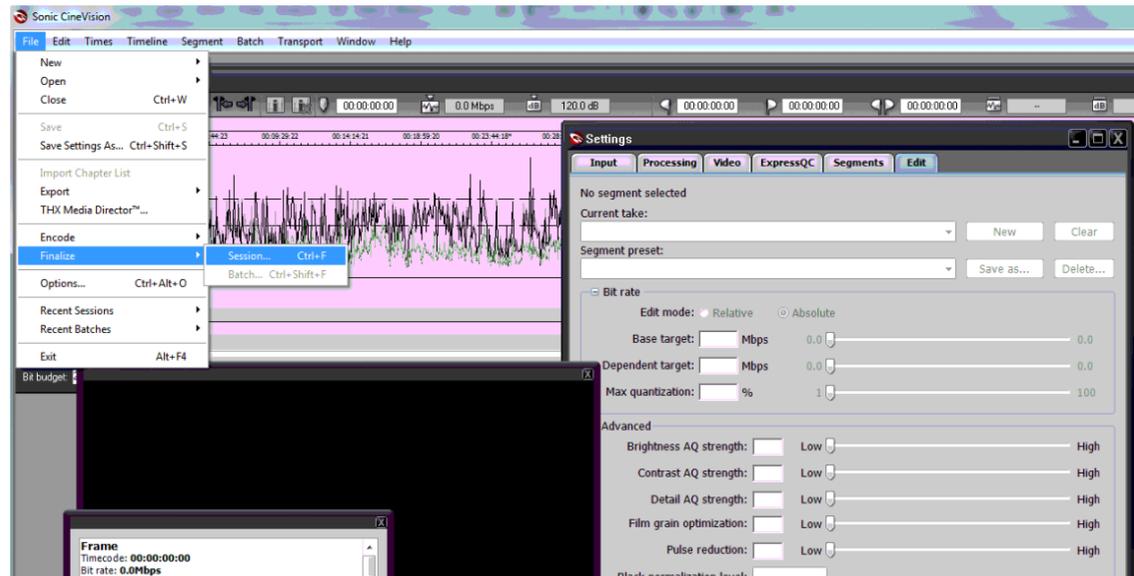
Your then ready to encode.



your encode will now start, this could take a while depending on your PC spec.



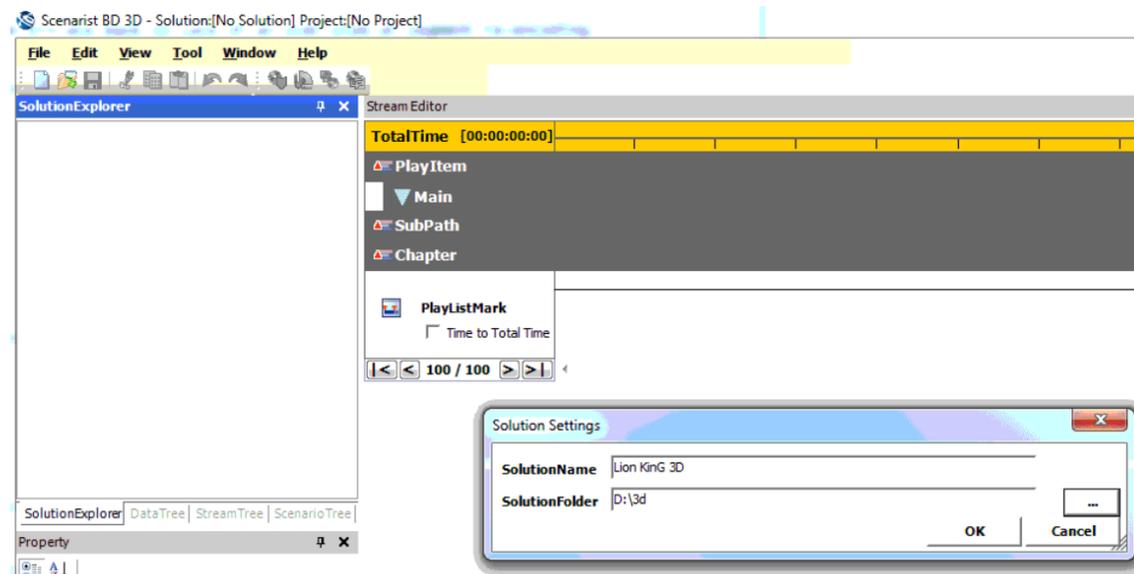
Once the encode is finished you can either re-encode some segments again or just finalize the encode. Once finalized no segment re-encoding is possible.



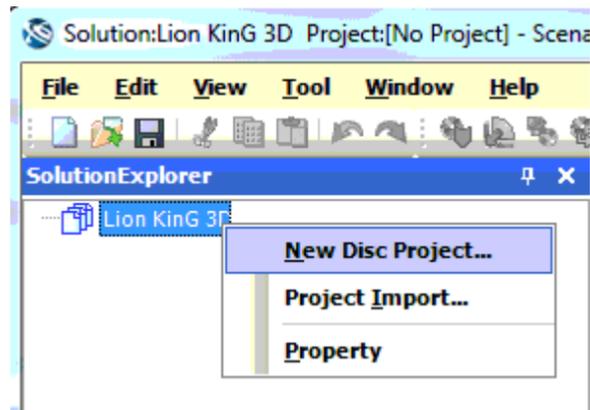
Save the mvc's and your ready for authoring.

Now its time to fire up Scenarist.

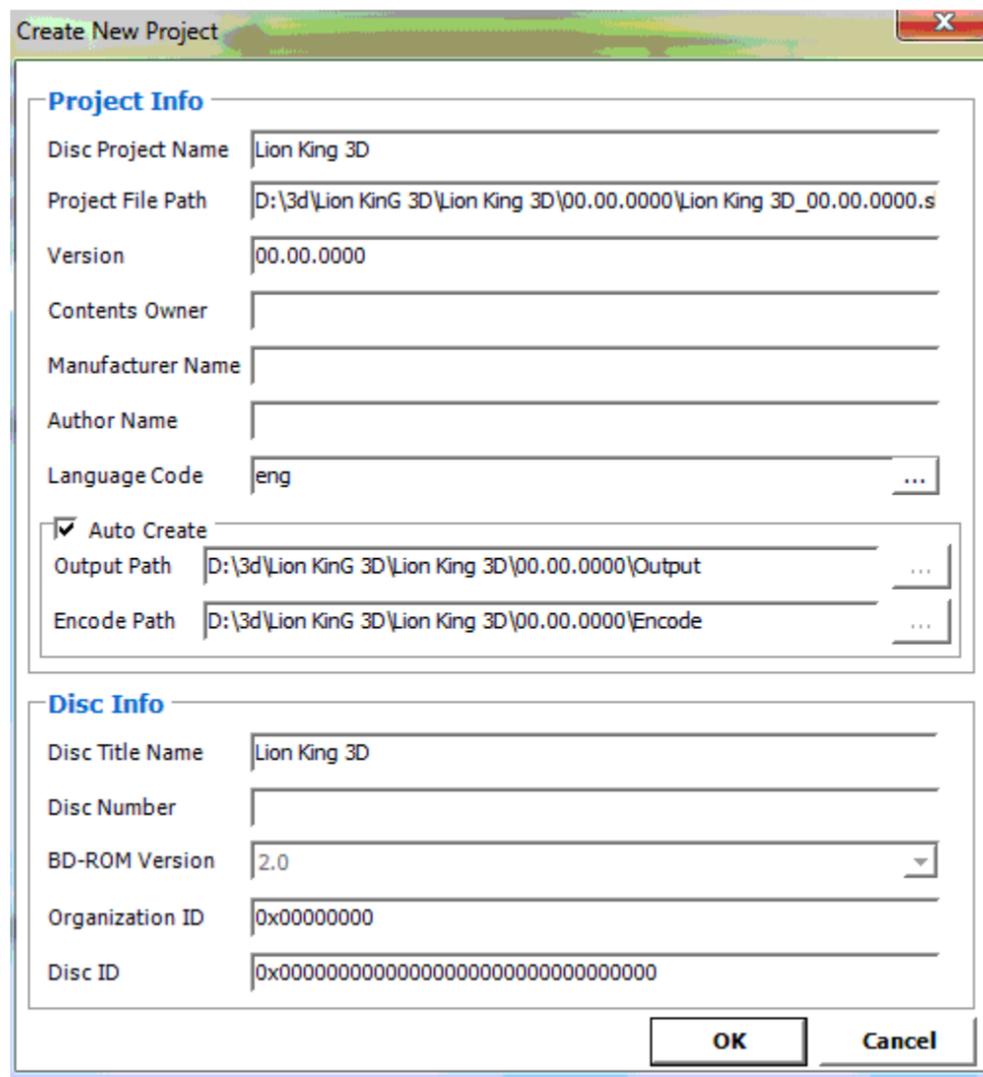
Once its open, hit the FILE tab and NEW SOLUTION option. Name it and select a folder to us then hit OK.



Right click your newly created solution and click NEW PROJECT

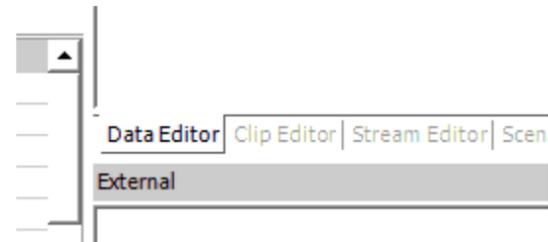


Name the new project.



Now its time to import your files.

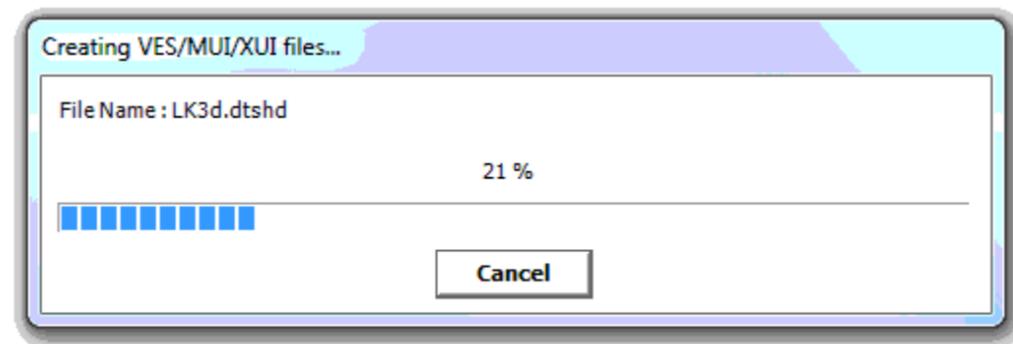
Select the Data Editor tab in the scenarist window.



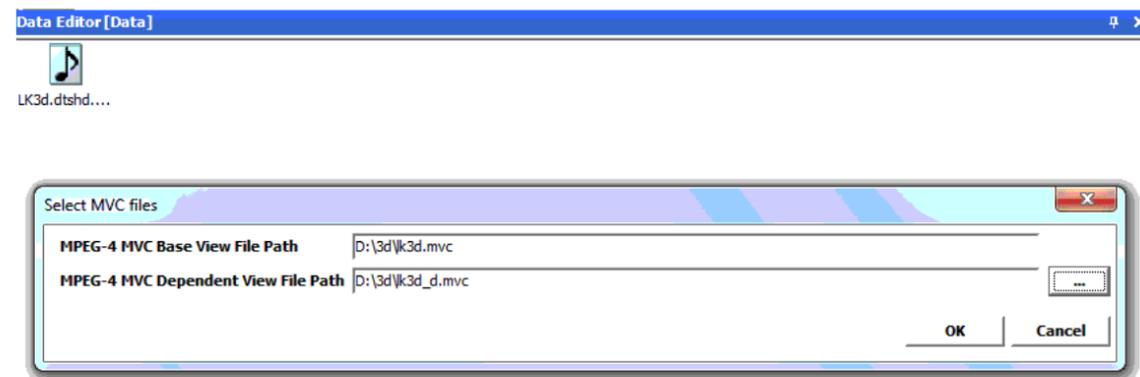
Locate the mvc files and audio file on your hard disc and select 1 of the mvc files along with the audio file then drag and drop them into the Data editor window.

A Select Coding Type window will pop up when importing xxx.DTSHD audio. Hit OK. The other option in the drop down box is only used when importing secondary audio (as used in PIP tracks etc).

A Creating VES/MUI/UXI files.... window will pop up.



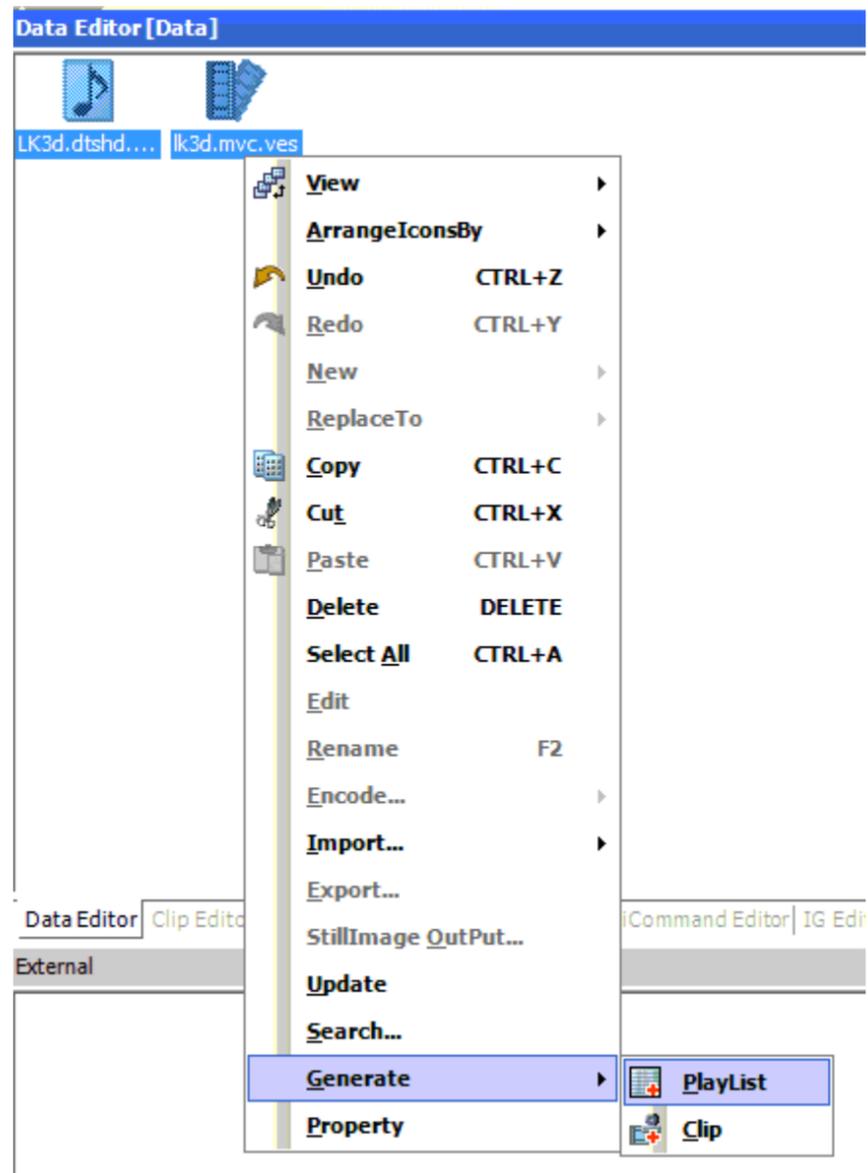
When it imports the mvc files it will ask you for the location on the Dependant view file path. find it then Hit OK



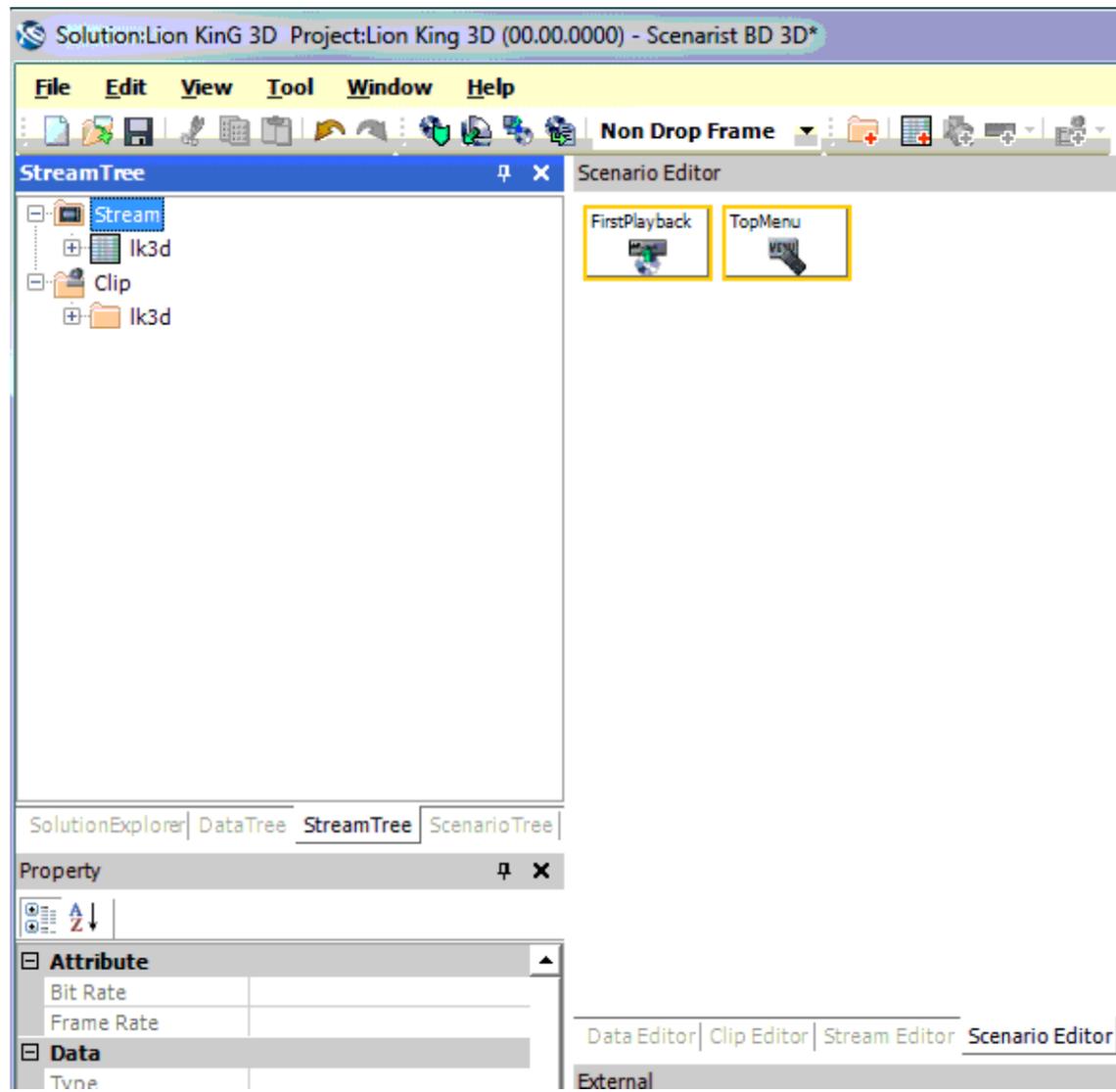
It will then create VES/MUI/UXI files for these.

A reading ES.... window will then pop up, once thats done you will see 2 file icons, 1 for audio 1 for video in the Data Editor window.

Highlight them both (right click CTRL right click). With them both highlighted, left click then select the GENERATE tab, then select PLAYLIST.

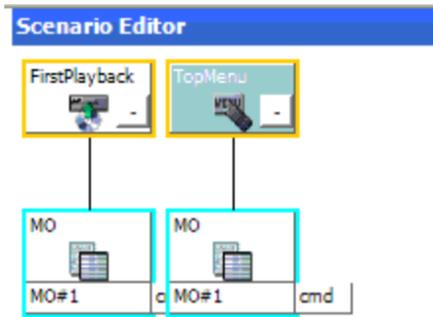


Change the Data Editor window to Senario Editor and change the Solution Explorer to StreamTree.



In the Senario Editor window RIGHT click on FirstPlayBack then LEFT click on Set MovieObject then click OK in the popup window.

Do the same for the TopMenu.



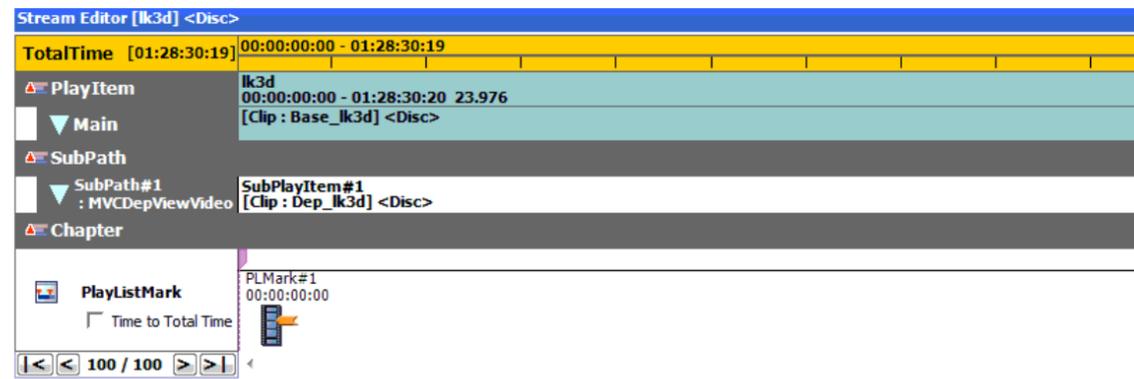
Now select the playlist from the StreamTree window and drag it to the FirstPlayback MO. Do the same for the TopMenu MO.

| Attribute | |
|----------------|------------|
| BD ID | 00000 |
| Playback Type | Sequential |
| Playback Count | 1 |

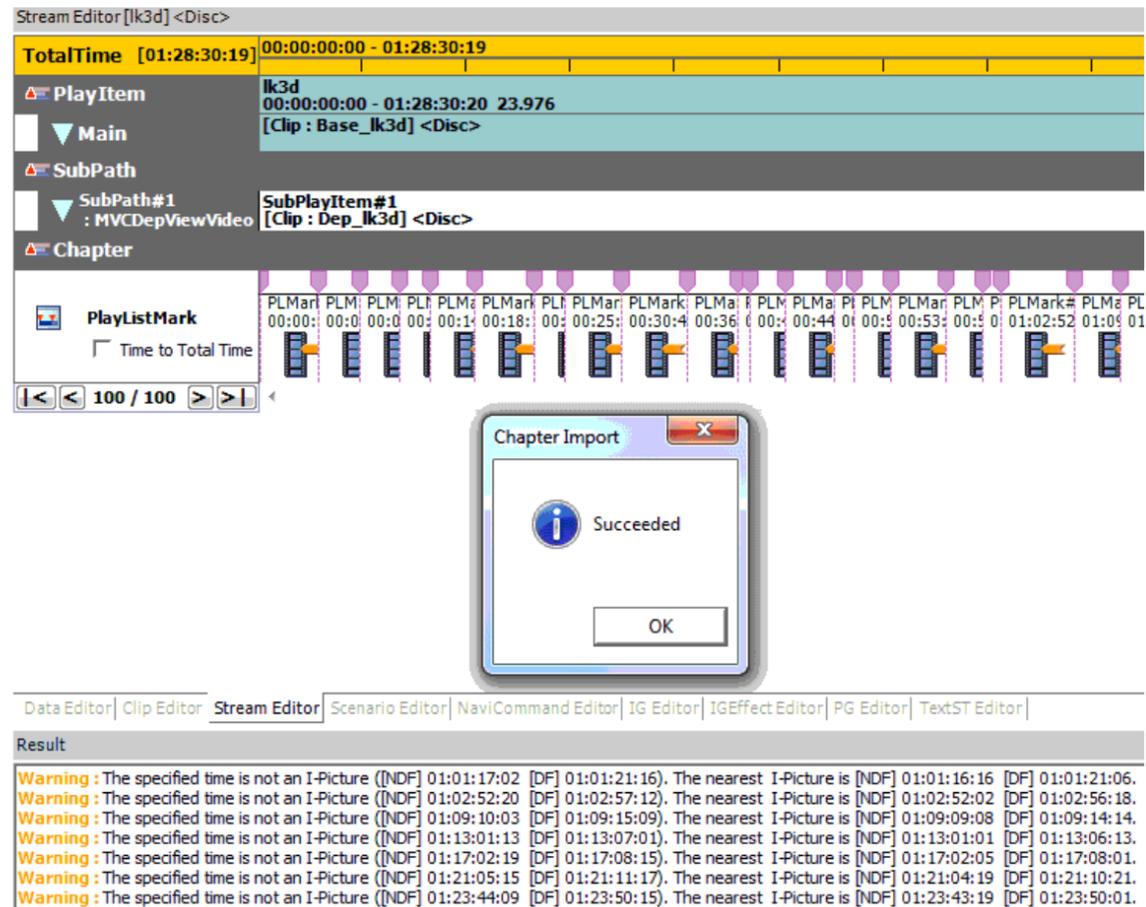
For easy navigation we can add chapters. ClownBD will have demuxed these and and created a chapter.txt file. We use the ChapterGen prog to convert this txt file into a Scenarist CSV file. Just open the TXT file and save it as a Scenarist csv file then close it.

Back in Scenarist

Now select Stream Editor and RIGHT click on the PlayItem 00:00:00:00 - 01:28:30:20 23.976, select IMPORT then CHAPTER IMPORT FILE



Chapters will be imported, you will notice there are warnings in the Results window. You can ignore those.

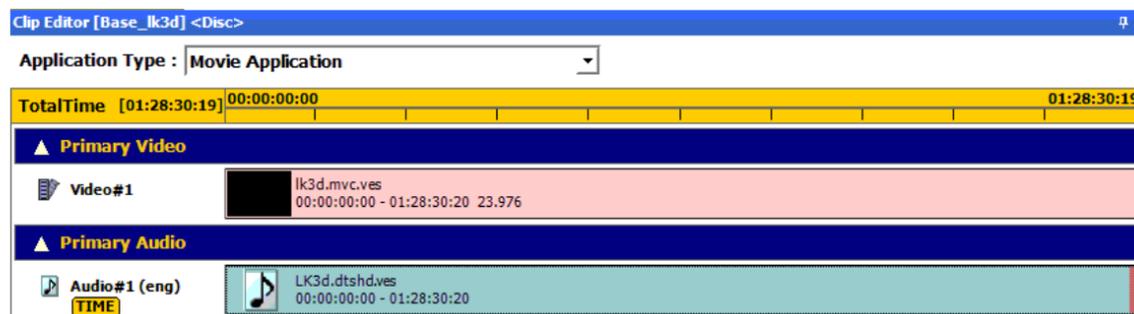


We now need to trim the audio as it wont mux it as the video running time is shorter as we trimmed it when creating the avi's.

First change the frame rate in the attributes window to 23.976 from 29.97 then

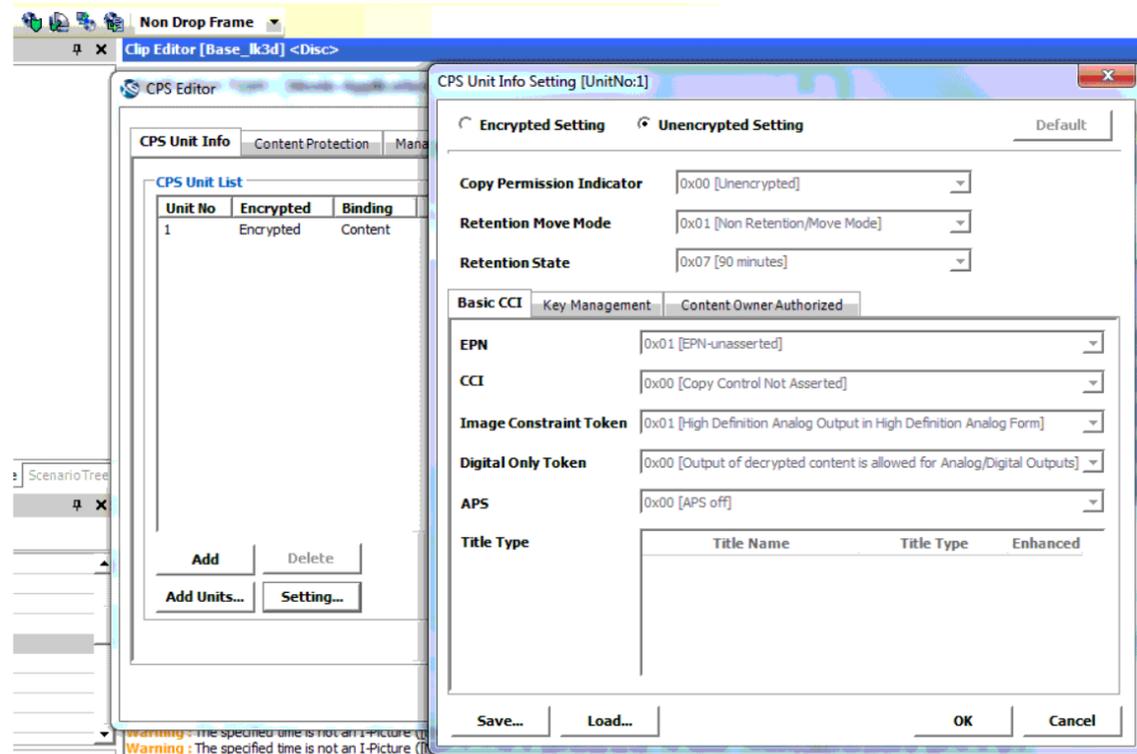
Select the Clip Editor window, you will notice the video is 15 seconds shorter than the audio.

Just RIGHT click the audio track, LEFT CLICK Time Info and change it to match the Video length.



ere almost ready to mux :)

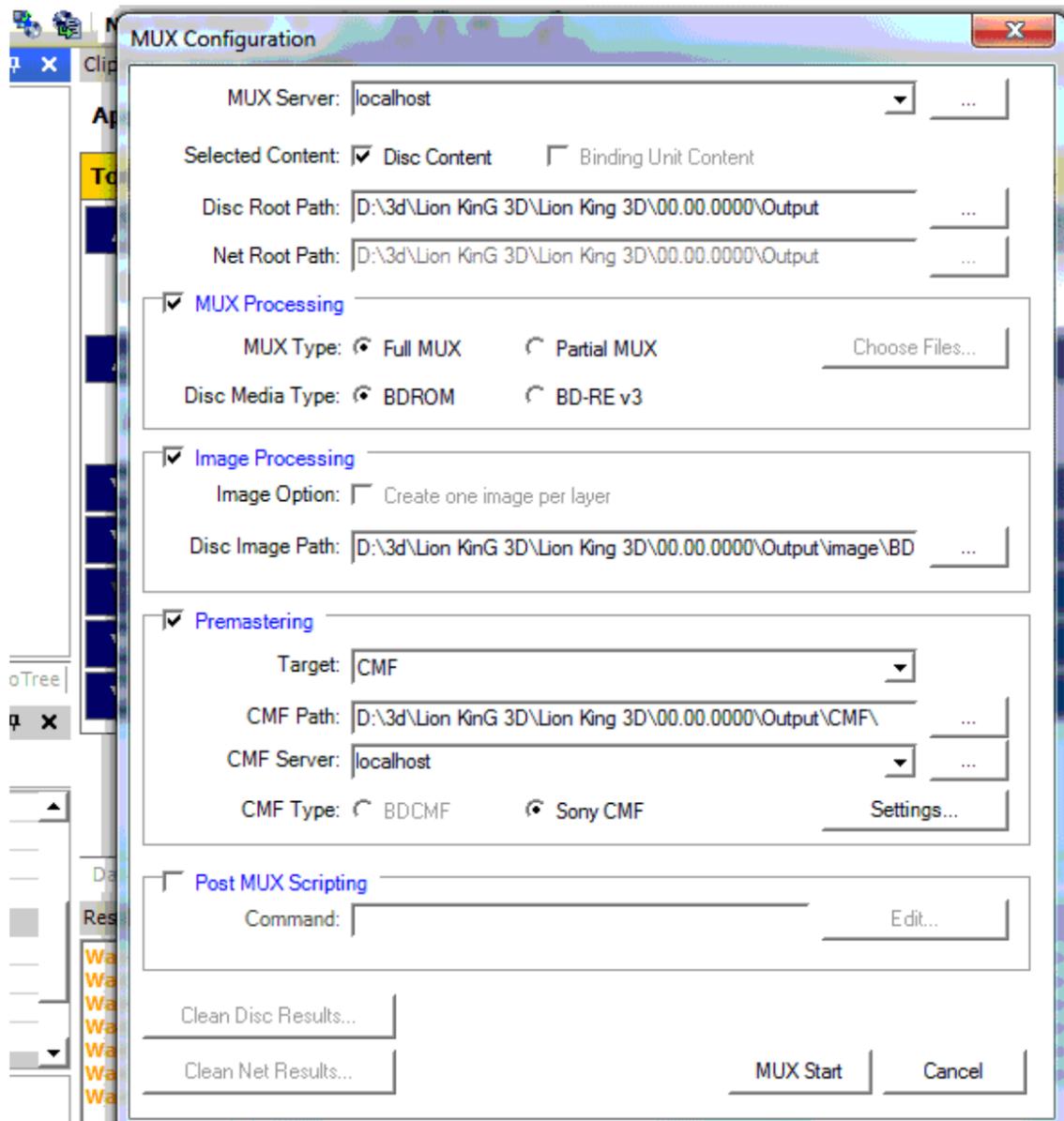
Click on the CPS tab on the top tool bar, click settings... then tick Unencrypted Settings then OK, and OK again.

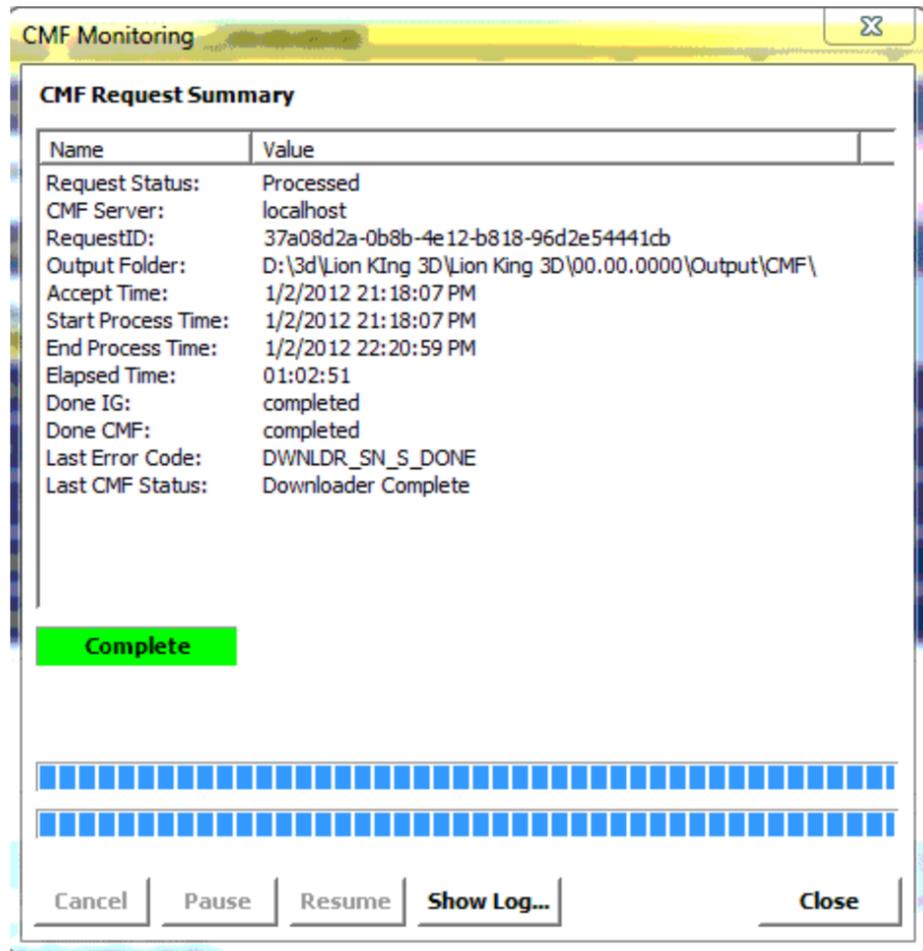


Click on the DISC layout editor and change the Volume Label to a title of your choosing then click OK.

Muxing

Click the MUX icon on the top tool bar, at the mux Configuration window tick Premastering, make sure Target is CMP and Sony CMF is ticked. Then click MUX START. A pop Warning window will tell you you are creating CMF and your project contains unencrypted CPS units. Ignore it and Click CONTINUE. You will get another Warning, its just to let you know the chapter points dont fall on an i frame. You can ignore this.





if the mux fails with a BUFFER UNDERFLOW, you need to manually change the TSRecording Rate from the default -1. Open the Clip folder in the StreamTree and LEFT click the Base_Ik3d.

You need to know your video and audio bitrate combined. It normally falls between 37000000 -42000000. You dont need to be exact.



Once set, mux again

After the mux is complete go in to the solution folder

3d\Lion King 3D\Lion King 3D\00.00.0000\Output\CMF\Dst0

you will see the file ud.dat. This is your iso. rename it with an .iso extension. you can now either mount it or burn.

Job done.

