

Editing of DVD-recorded DVDs

Introduction

At a certain moment the happy owner of a DVD+R(W) recorder as well as a PC DVD-burner will question whether these DVD recordings could be edited on a PC (without recompression). Especially to;

- Improve the menu, e.g. by a different background, a music clip, additional information.
- Improve the start and end of a video-clip and/or to add a fade-in or fade-out to the audio
- Combine recordings from different DVD discs on one DVD, e.g. episodes of a TV series like e.g. The Avengers
- Remove advertisement-blocks (this is also possible on a DVD-recorder, but not when it concerns a +R-disc meant to be used on an regular DVD player

On the Internet I did not find any information on this subject, while the regular Ripping-programs did not function on DVD-recorder files.

My recently acquired (Philips) PC-burner was bundled with a/o the Sonic MyDVD program. According to its help file this program would accept files from a DVD recorded on a Philips DVD+R(W)-recorder. However, the provided information is rather limited (and as appeared later) not always correct. After quite a number of tests/experiments it turned out that it indeed was possible to produce a DVD with the "standard" structure. Now the "rippers" did their job and produced video and audio files that were suitable for any DVD-authoring program. However, some programs do not accept the compressed (AC3) audio (e.g. MyDVD). In that case this file must be converted to regular WAV.

So, it is not so simple, but it is worthwhile!

Via this note I would like to offer my experiences to those who are interested in this subject (and so, can avoid the pitfalls I have met). Mind you, this note concentrates on the main aspects! If MyDVD is used for authoring the final DVD, information on "cosmetic details" can be found in its help file.

Used recorder and software:

- Philips DVD+R(W) recorder DVDR-890
- MyDVD 4.04 (build 65505, bundled with the Philips DVD burner DVDRW416K
- Smartripper 2.41 (freeware), HeadAC3he 023a (freeware)

Some general comments on MyDVD

MyDVD is a quite simple yet fairly complete video program, even "moving" menus and animated thumbnails are possible. It makes use of templates (called *styles*), that enables inexperienced persons to create a working DVD in a reasonable time. However, this also limits the possibilities, like for instance that in a DVD project all menus have the same *style* (background, buttons and audio clip). Further, it is not possible to change/create chapter points of an existing clip. The help file gives a fairly accurate description of the many possibilities, but during the many experiments I discovered that some points are not covered or not (completely?) correct. Therefore, let me start with a summary of these points.

1. Win2000 as an upgrade of Win98SE: MyDVD does function with o/a Win2000, but it will not if the system is an upgrade of Win98SE and the old system is "overwritten" (the installation of MyDVD is running o.k., but the program does not start). On the other hand, if during the upgrade from Win98SE to Win2000, one chooses for a new system along with the old one, MyDVD does function properly (apparently the program expects a system directory called WINNT and not Windows).
2. Importing clips from a DVD+R(W) recorder
This might go wrong, for instance;
 - a) Importing a clip directly from a DVD disc is possible, but in contrast to what is mentioned in the help file, after the copying process one must not remove the DVD. When it is removed from the station, the program will halt during the creation process of the DVD (it searches for the disc). Also because of the speed, one can better copy the content of the *VIDEO-TS* folder to the hard disc (see next chapter).
 - b) MyDVD won't accept DVD-discs that have been made "compatible" by the DVD-recorder (this "feature" improves the compatibility on stand-alone DVD-players).
 - c) Files from a +RW-disc of which the title/track has been divided in a number of clips (or chapters) can give audio-sync problems in some of the clips. This can be avoided by a slight trimming of the start of the clips (first one is not needed. For trimming, see next section).
 - d) When using re-used discs, some strange phenomena were found (not able to import, mixing of chapter points, audio out of sync). These problems were gone after applying a full "disc erase" on the DVD-recorder, before using them again.
3. On imported DVD-files the command *Preview* only functions on the first button of the title/clip, but without audio. When one of the next buttons is selected, the program will freeze/halt.

4. The command *File, Save as..* is not always available (although sometimes after *File, Save* an Explorer Window pops up with the possibility to save the file under a different name). To avoid that important “basic” files are overwritten, before starting the editing process one should copy these files manually.

Importing DVD+RW files and creating video/audio files

A detailed description of a number of the below subjects can be found in the MyDVD manual (help file). But, for completeness sake, here still a short summary will be given.

For the basic steps use has been made of a DVD+RW with 2 titles, recorded on a DVD-recorder. The menu of such a DVD is given in the adjacent figure. Further one has to know that the DVD-recorder places chapter markings every 5-6 minutes (via the recorder these can be deleted or edited).



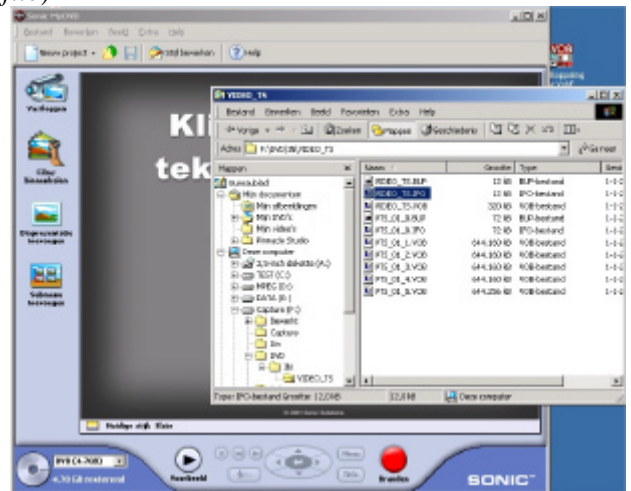
Step 1: Copying the DVD files to the hard disc

Via the Windows Explorer a “project” folder is created on the hard disc, e.g. F:\DVD\In. After that the DVD disc is inserted in the DVD station and via the Explorer, the folder VIDEO_TS (or its content) is copied to the HD.

Step2: Importing the DVD files in MyDVD (details in help file)

The files are imported as described in the help file. So start MyDVD and select *Create or Modify a DVD Video Project*.

Open the Explorer and resize its window so that the MyDVD screen is still visible. Open the VIDEO_TS folder and locate the file VIDEO_TS.IFO. Drag this onto the MyDVD-screen (right). MyDVD will show progress bars for the processing of the files.



When done, MyDVD will have created buttons for each title/clip and every chapter point. The button will be labelled as VTS_01_X Y, where X is the title and Y the chapter point within a title. The result of our test disc is shown below, 3 screens with 6 buttons each. The first clip starts with VTS_01_1 1 and the second one with VTS_01_3 1 (on the second screen).

Remark: By the way for unknown reasons the first title is labelled as X=1, while the second one as X=3 (accidental?).



Step3: Editing the title/clip in MyDVD (details in help file)

To edit the title/clip, double-click the first button of the title (here VTS_01_1 1 or VTS_01_3 1) and the edit window pops up.

Here one has to set the start and end frames.

Advice: To determine the optimum trimming locations, one can best start by analysing the original material (via the DVD-recorder on the TV or via the software player on the PC). Note these locations where the clip can/should be cut.

Remark: As it is not so relevant for obtaining audio/video files, in this section no attention has paid to the layout of the menu. This subject is treated in the last section.



Step 4: Creating the DVD-folder (details in help file)

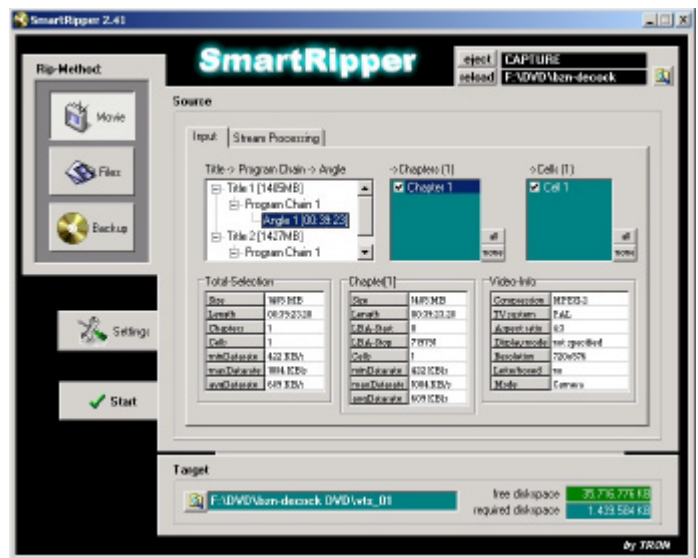
Save the project and create a DVD volume folder via the menu *Tools*.

When done, test/check the result by opening the Video_ts.ifo file in the software player.

Step 5: Ripping the Video and Audio files

For this step use is made of the easy to use SmartRipper. For our purpose the default settings are OK.

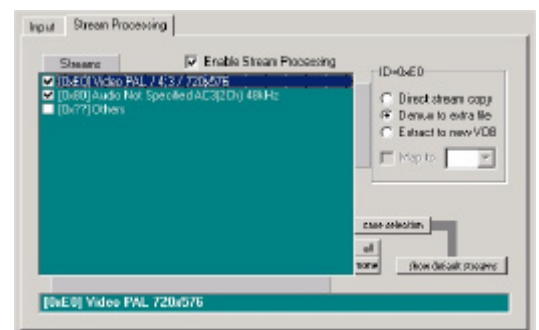
Take care that the DVD station does not contain a disc and start SmartRipper. The program will report that no DVD could be found. Click at the Explorer icon at the top right hand side of the window and an Explorer window will pop-up. Locate the folder in which MyDVD has created the DVD volume and point to the Video_ts folder. After analysing the folder content, Smartripper will show details on the longest clip. Click at *Target* folder and select an appropriate location for the (ripped) audio en video files. Then open the first title (as shown, so *Title 1, Program Chain 1, Angle 1*).



After that, select the *Stream Processing* tab and tick *Enable Stream Processing*. Then in the screen, tick the video stream and tick *Demux to extra file*.

Repeat this for the audio information.

When ready, click at *Start*.



SmartRipper will show a window with a lot of data, a/o the progress of the ripping process. Pay attention to the AV value, this is the time-shift between audio and video stream.

If a too high a value is shown (> 100msec), this most likely is caused by an error in the start of the clip (just repeat the *start frame* in step 3 and the problem should be solved).

When SmartRipper is ready, a number of files will be available in the particular folder. The most important ones are;

Video = vts_01_([0xE0]_Video_PAL_720x576)_1.m2v

Audio = vts_01_([0x80]_Audio_Not_Specified_AC3(2Ch)_48kHz____)_Delay_19ms.ac3

If needed/wanted, repeat above step for the next title/clip.

Step 6: Converting to WAV

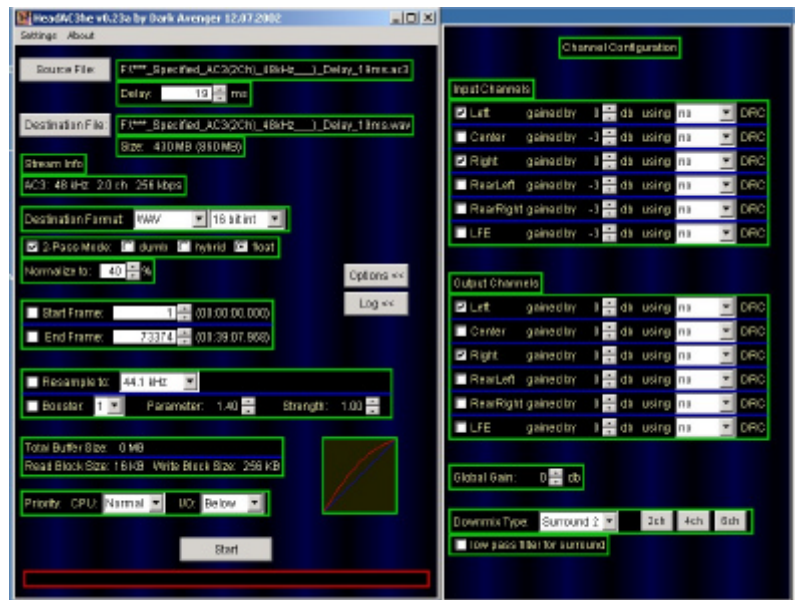
When a video “authoring” program is used that only accepts non-compressed audio (like MyDVD), the AC3 audio file must be converted to regular WAV. This can be done in many ways, but we will use the program HeadAC3he (a/o DVD2AVI can be used too).

Note: Get the program with all required DLLs via the Internet and decompress them to one folder.

Start HeadAC3he, open the AC3-audio file (via *Source file*, the *Destination file* field will be filled with the same name).

Adapt;

- 2 Pass mode, *Float* = ticked
 - *Resample to* = not ticked
 - *Normalize to* = 40% (default is 100%, but the “real” level is around 30-50%)
 - In the right hand window, click at *2CH* and correct output channels *DRC* to *NO*.
- After this, click at *Start* and the WAV-file will be generated (in the folder of the source file).



When to use the “ripped” audio/video files?

- clip contains an appropriate piece of music/sound that could be used as background for a menu.
Then the WAV file of step 6 is edited in an audio editing program (searching for the fragment, copying it and if needed applying fade-in or fade-out).
- audio of the clip starts too loud or ends too abrupt.
Then the WAV-file can be corrected in an audio editing program by applying fade-in or fade-out
- one likes to combine clips of various DVD-recorder discs on a new DVD (although this can also be realised in another way, see next section).
- one wants to edit a clip with ads in a MPEG-editing program (the next section gives a solution that is possible in MyDVD)
- one wants to edit complete movies (without ads) in a video authoring program with more possibilities (e.g. DVDIt!).

Possibilities of DVD-recorder files in MyDVD

1 Using a number of titles/clips from the same DVD+RW disc

In fact this has been treated in the above example. Here the VIDEO_TS.IFO file was dragged onto the MyDVD window and the (18) buttons of the 2 clips were spread over 3 menu screens. As one can not edit the menu structure afterwards, in this example the second clip can only be started from the second menu page. The only way to change this is to delete all the buttons of the chapter points (by clicking at one and using the *Delete* key). This will result in one menu page with the (start) buttons of the 2 clips.

However, a clear menu structure with chapter points can be made in the following way;

- a) In the MyDVD window, create 2 sub-menus (click on the *add sub-menu* icon) and edit the labels (here “Film 1” and “Film 2”, see below figure).
- b) Double-click the “Film 1” button and the (empty) Film 1 sub-menu is visible. Drag the VIDEO_TS.IFO file from the DVD+RW disc onto this screen (as in step 2). Like in the example, the 18 buttons will be created on the sub-menu and 2 other menu pages (figure in the centre). Go to the second menu page and delete the first button of the second clip (here VTS_01_3 1). This will remove all buttons of this clip.
- c) Repeat this step for “Film 2” (drag the VIDEO_TS.IFO file onto the Film 2 sub-menu), but now the button of the first clip is deleted (VTS_01_1 1). Then this sub-menu will start with the second clip, see “Film 2” figure.



2 A number of titles/clips from different DVD+RW discs

It is not possible to import more than one IFO file at a time, even not in different sub-menus. However this can be solved in the following ways;

i) DVD without chapter points (thus only one button per clip).

- In the described way, the DVD-IFO file of disc 1 is dragged onto the (main) menu. This results in a number of menu pages with buttons for all clips and chapter points of disk 1. Apart from the first button of the selected clip (Film 1), all buttons are removed.
- Disc 2 is ripped in described way (steps 1 to 6), so that the video and audio (WAV) files of Film 2 become available. Via the Explorer the video file is dragged onto the (main) menu. This will create a button for Film 2. Then the WAV file is dropped onto the button of Film 2.
- If needed, the last step can be repeated for another clip.

The result is a (main) menu with one button for each clip.

Remark: Here, after playing a clip/film, the player should return to the menu. Therefore, via *Edit Style* one should deselect the *Play all* item!

ii) DVD with chapter points

- Create a sub-menu and drag the DVD-IFO file of disc 1 onto this sub-menu. Save this project and create a DVD volume folder (via menu item *Tools*).
- In MyDVD open the *.DVD file in the folder *OPENDVD* of this DVD volume (this should give the same result as in the first step).
- In the main menu, create a second sub-menu and drag the DVD-IFO file of disc 2 onto this page. The result is identical to that shown in the above figure, one main-menu and one sub-menu per clip.

Remarks: - If one wants to add another clip, one should follow the above steps 2 once more (create a DVD volume folder, open the *.DVD file, create a sub-menu and import the IFO file of disk 3).

- Here, after playing a clip/film, the player returns to the particular sub-menu (here the status of the *Play all* function has no effect)

3 Title/clip with ads

The adjacent figure shows a DVD-record of a movie, split in 4 parts, preceded and interrupted by advertisement-blocks.



In MyDVD one cannot simply remove the ad-blocks. On the other hand, if very short “frozen-frame” periods are accepted, the following solution is possible;

- a) On the DVD-recorder somewhere in the first ad-block, the movie track/title is divided (e.g. at point A). This results in 2 clips (one till point A and the second one for the remaining part). Divide the second clip at point B and repeat this step at C. Eventually the disc will contain 4 clips.
- b) The files of this DVD+RW disc are imported in MyDVD (step 2) and edited (step 3). The result will be 4 separate titles/clips without ads.
- c) It will be obvious that all titles should be played before returning to the menu. Therefore, via *Edit Style* one should select the *Play all*!

Remark: If the DVD should contain more than one movie (with removed ad-blocks), one should make use of sub-menus. In that case, after playing one movie one returns to the particular sub-menu.