Video to DVD – Part 4

T.O.M.S.

We'll use this part to pick up a few items we omitted to mention in Parts 1-3; also to consider a number of valuable points from reader-feedback, not in any order.

DVD format (in)compatibility

We forgot that the dreaded incompatibility between Philips's DVD+R/W and the rest-of-world's DVD-R/W format may well cause problems.

Unless you're lucky, a DVD burner supplied with your PC may be limited to DVD+R and +R/W, whereas only some domestic players will handle DVD+R and most will balk at DVD±R/W.

So for general compatibility with DVD players, arguably it's best to stick to the near-universal DVD-R format.

Media are now no more expensive than DVD+R and, with the better-known-brand multi-format/multi-layer burners now available for under £50, that may not break the bank and, in any event, is usually a cheaper solution than buying a compatible DVD player.

Video from digital cameras

It's been pointed out that some digital (still) cameras have a 'video' function which can produce a limited-duration movie, often with mono sound.

The resultant file is generally downloaded to the computer as an AVI-format video clip which can then be viewed using Windows Media Player or similar. Or, for editing purposes, it may simply be dragged directly into Movie Maker, VideoStudio, etc.

Video quality varies between cameras but, typically, this can be 384×288 pixels at 25fps (i.e. a quarter of the resolution of a full PAL frame) or even up to 640×480 pixels.

The latter converts well and looks good on PAL/DVD, but even the quarter-frame image may be acceptable.

Rendering times

Throughout Parts 1 to 3, we stressed that saving ('rendering') edited material as an output file using Movie Maker may become a very lengthy process and and subsequently burning a DVD can take as long again.

All this is due to the need not only to render the basic edits, transitions, effects and titles, but also to convert the edited video from AVI or WMV format to the final MPEG 2 standard required for burning to PAL/DVD.

In Part 3, we said that VideoStudio can potentially achieve the same object in much shorter times, specifically if the source material has already been captured in the MPEG 2 format (e.g. from a DV camera or files downloaded from an existing DVD).

So recently we wondered what was awry when VideoStudio took almost *two hours* to render minor edits made to some MPEG 2 files captured off a couple of discs from a third party. This was resolved by the realisation that the two (unmarked) source discs were *not* DVDs, but CDs...

Sure enough, the MPEG 2 files on them were found to be in the 'SVCD' format, not PAL/DVD, so their recorded video standard was 480×576 pixels at 25fps.

Hence, even if no edits had been applied, they would still have to be converted to the full PAL/DVD standard (720×576 pixels at 25fps), before burning the DVD. That's an awful lot of number-crunching, thus taking ages to complete. Thankfully, the DVD burning process using VideoStudio took only a few more minutes.

You might think we'd have noticed the degradation in video quality if the source

material was at SVCD standards, and not full PAL/DVD. Interestingly, this wasn't the case and, indeed, even with the benefit of this extra knowledge, significant degradation becomes evident only if the Pause button is pressed during replay and the still image inspected.

Ergo don't knock the SVCD option; it may be an acceptable alternative if you can't record to DVD.

To summarise this topic: Output file 'rendering' will invariably be a time-consuming process for Movie Maker. It may take a relatively short time for VideoStudio, but *only* if the source and output file formats are identical, e.g. PAL/DVD−>PAL/DVD, or SVCD−>SVCD. *Any* input/output format dissimilarity will necessarily entail re-formatting = lots of time taken.

Reading DVDs *(VideoStudio)*
In Part 3, we described VideoStudio's valuable facility to capture source video files from DVDs, in digital format, but mentioned that you may need to first run the disc through something like Windows Media Player to sort out which titles/chapters you need to download. There's a couple of follow-on points to make on that.

Firstly, numbering of both titles and chapters on disc starts from *0* (zero), not *1*, which can be a gotcha. So, for instance, to capture the fifth chapter in the third title, you need to download (numerically) Title 2 / Chapter 4. Got it?

Secondly, when you click on the adjacent box to select a listed title or chapter, it can take up to 15 secs of hourglass before the box becomes ticked and you can make another selection. This seems to be an unavoidable function of reading the DVD catalogue, so give it time to do it.

Multiple PIPs *(VideoStudio)*
The neat picture-in-a-picture (PIP) feature was also explained in Part 3. Through a touch of trial-and-error, we've since realised it's possible to apply *multiple* PIPs to produce some really impressive effects.

The way to do this is first to take the main (background) video clip or still image, apply the first overlay as described and render/save the result – as an interim output file.

Then load this intermediate file (effectively now a *source* object) back into VideoStudio, apply the second PIP overlay, render the composite result, and so on.

So in principle, by this simple reiterative process, you can finish up with multiple PIPs, perhaps set to fade in a few seconds apart. It's all done in the digital domain so there's no degradation in video quality by re-using what, in effect, is multi-generation material.

A point to consider is that, by combining multiple video clips in this way, you will also combine their soundtracks. Bedlam! This is easily fixed by muting each overlay clip soundtrack before rendering.

Re-editing
The previous topic confirms that, despite what some video editing guidebooks might say, it *is* perfectly feasible to take a rendered (output) video file and, if desired, feed it back into *any* editing application for further editing, combining with other material, and so on.

We've italicised the word "*any*" in the previous sentence because, of course, a video file prepared in and output from one edit application can then be fed back into another.

So, for instance, as we have the freebie Movie Maker running on all our PCs, but only one copy of VideoStudio, we might well do most of the preparatory work on multiple machines, using Movie Maker, render the interim files, then subsequently transfer them to the machine running VideoStudio for combining, further editing if required, final project rendering and DVD-burning.

Another reason for doing this is that some of Movie Maker's effects such as "film aging", in our view, are superior to those in VideoStudio, so can be 'burnt in' at this early stage of editing.

What the guidebooks may be referring to by saying that video "cannot be re-edited" is that, once effects, transitions and titles have been 'burnt in' (i.e. rendered), they cannot then be removed.

That makes sense but, depending on the circumstances, it isn't necessarily an irrevocable step. For example, if a full-colour clip has been made monochrome, maybe using Movie Maker's Grayscale *[sic]* effect, you can't then remove the effect and recover the colour, once that clip has been rendered.

However, if a simple (say) 2-second transition from one video clip to another has been rendered but needs to be removed, the composite result can easily be cut at the two frames immediately preceding the start and following the end of the transition, and the cut portion discarded. Dumping the two seconds of overlapping transition video is unavoidable – but the loss may be negligible.

Chroma key handling *(VideoStudio)*
Having looked at the piccy captioned "*Fig 4 Positioning & sizing the overlay*" in Part 3, someone remarked that it could be difficult repositioning and resizing an overlay clip or image if you can't see the main background scene.

Good point; easily fixed. Simply click on Apply overlay options to apply the transparent mask, giving the result shown in "*Fig 5 Application of transparent mask*", and then click on the overlay image to select it.

Even though the mask is now transparent, the overlay bounding box and eight drag boxes will be displayed, so you can easily resize and reposition the overlay, as you wish, in relation to the now-visible background image.

In effect, this is identical to what you would see and do if using Draw, so it's a perfectly natural procedure and just as user-friendly.

File (mis)management
Another reader underlined just how important our mention in Part 2 of mislaying files or getting them mixed up can be.

Bearing in mind that the original (source) files are crucially important, and may be irreplaceable, it's a good insurance against accidental loss or corruption to make back-up copies onto either hard disc or, maybe, CD or even DVD±R/W (bearing in mind the filesize could well exceed even a 700MB CD capacity).

Inadvertent file mismanagement may include moving and/or renaming any of the source (input) movie clips. Next time you come to run the Project (command) file, or save (render) the movie file, the source files won't be found in their expected place and the operation will fail.

(VideoStudio has a 'Relink' facility to enable you to find and re-register and/or re-name the requisite file[s] but this is a practice to be avoided where possible.)

Furthermore, it's perfectly feasible to progress through a complex editing process by, for example, first putting together and editing a series of clips, render the outcome and store the file for later use, then repeat the process with other material, and so on.

In these circumstances, you may later find you're taking a number of pre-rendered (i.e. *output*) files and putting them back into Movie Maker or VideoStudio for, say, adding multiple PIPs (as explained above), or combining into a more extensive epic.

It's easy to see how, unless you keep a *very* close eye on which files are which (input, edited, rendered, re-input, re-edited, re-rendered), it really is very easy to lose track of who's who and what's where.

For these reasons, the more complex the project, the more advisable it becomes to first set down the 'hierarchy' of what source material the project will consist of, the intermediate editing stages, the name of each sub-project file, the rendered file names, where and when these may be reprocessed, the complete project filename, and so on.

A case study

We've given you an awful lot of information to date, and often in piecemeal fashion, so let's try to illustrate the overall proceedings better by considering an actual 'case study' of what can easily be accomplished, with very little experience required, and even if the only edit application you have is Movie Maker.

This pulls together capturing video from both analogue and digital sources; simple non-linear editing and re-editing; using RISC OS applications to produce titles; rendering output files; processing images for a 'slideshow'; and finally burning the results to DVD.

The setting is that 'our Jim' (Nottingham) at T.O.M.S. had a family wedding in 2005. His son and bride splashed out on having their happy day professionally recorded (video and photographs) and a DVD produced in addition to the traditional photo album.

All went delightfully well – until bride and groom later saw the DVD which was most disappointing. The opening sequence and titles were, frankly, rubbish – even including a spelling mitsake ("*Duns Catsle"* [sic]) – the choice of material wasn't really suitable in places, nor even in chronological order, and the end credits did nobody any favours.

Oh dear, oh dear! Clearly all this received the thumbs-down. Bride and groom couldn't face the hassle of getting the professionals to effect major changes but, after viewing the DVD, Jim determined to see what could be achieved, in-house, using Movie Maker (this pre-dated our getting VideoStudio).

It turned out to be a very straightforward, successful and therefore extremely pleasing exercise. Let's see what was done.

– **Importing analogue video** Not having access to the source video, Jim first imported the material from the DVD into his PC. Without VideoStudio to download the digital-format files directly, he fell back on the indirect method of connecting a DVD player to a TV card and using that as the 'free' analogue-to-digital converter, necessarily accepting the minor drop in quality and that the AVI-format file was at 640×480 pixels at 30fps, all as we explained in Part 1.

– **Importing digital video** Someone else had used their own DV camera on the happy day so Jim connected that to his computer, using a Firewire cable, and downloaded the DV footage onto hard disc (720×576 pixels at 25fps). In the event, this proved to be a very useful, secondary source of material.

– **Importing to Movie Maker** Getting the footage from both sources into Movie Maker simply entailed drag-and-dropping the two files, now in AVI-format but at different resolutions and fps, into the Collections pane. So far so good.

– **Editing the epic** Jim then set about re-editing the main file with the aim of improving on it. Cutting out the offending closing credits and replacing them with a slow fade to a blank screen, and fading out the musak track, was a good first step.

– **Correcting the chronology** Getting the chronology correct was in principle simply a case of cutting the wrong-order clips at their In/Out points and drag-and-dropping them into their appropriate positions.

– **(In)appropriate footage** Anything considered inappropriate was cut and discarded. This was a good point at which to introduce material from the second camera; that was simply a case of choosing clips from

the second file, copying them and drag-and-dropping them onto the main video timeline at appropriate points.

– **Replacing the titles** Clearly the original titles had to go – so out they went. Replacements were prepared using Draw under RISC OS, exactly as we described in Part 2. Background images were snapshots from the secondary footage, the results being not only more legible but pleasingly free of spelling mitsakes...

– **Smoothing the corners** Inevitably, all the cutting, moving and replacing clips, from two sources, resulted in many noticeable 'sharp corners' where adjacent clips butted together on both the video and, most noticeably, their soundtracks. What to do about that?

Various things were tried but, in the end, the simplest turned out to be the most effective. This was to insert a 1-second A−>B crossfade transition into the butt joints between all adjacent clips. The video was noticeably improved and, in particular, merging the fade-out/fade-in of each pair of quite different background soundtracks greatly improved the general smoothness of the re-edited production.

– **Adding a slideshow** The much-reworked video came to some 45 mins, so that left plenty of time to add a slideshow from a selection of the professionally-taken wedding photos, scanned in and prepared using all the procedures explained in Part 3.

– **Rendering** Sure enough, rendering all the many edit changes in the main movie file, drawn from two video sources recorded at different standards, and then saving in AVI format, took some considerable time. Rendering the slideshow also took a while as the JPEG images (with transitions) also needed to be re-formatted into AVI format.

– **DVD burning** As we discussed in earlier articles, Movie Maker cannot handle the DVD-burning process and third-party titles appear to be limited to 1-hour recordings. However, that sufficed for Jim's purposes and he fed a suitable 'front-end' menu, plus the rendered video and slideshow files, to the disc-burning software.

Another long wait was on the cards whilst it converted the AVI-format files into MPEG 2 format and the disc was finally burnt. It received a firm thumbs-up from bride and groom, leading to a 'production run' of more copies. Much pleasure to all concerned; *lots* of self-satisfaction for Jim.

It's worth stressing that he's no more than an inexperienced 'enthusiastic amateur' yet, with a bit of effort and application in his spare time, he was able to produce some *extremely* respectable results – certainly improving on the professionals' work.

This was done using pre-existing hardware (a reasonably powerful computer, a DVD player, a TV card and a DVD-R burner) plus Movie Maker and DVD-burning software. So his real costs were limited to a pack of DVD-R discs, easily offset by the 'value added' satisfaction and experience he gained.

The end bit

We seem to have covered a lot of ground in these four articles, thanks in large part to the many readers who've come back with queries and comments (with particular thanks to Gerald Fitton for checking the drafts and giving us the benefit of his experience).

We hope they contain useful and helpful information. The door isn't closed so do please come in with further feedback.

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