

Over the past couple of issues I have introduced some ideas for how digital video could be used in different curriculum areas and outlined choices of hardware and software. Last issue featured a basic 'How to' guide to using iMovie HD (on the Apple Mac). This article is the equivalent guide for PC users, in the shape of MovieMaker, a program that comes as part of Windows XP. It is very easy to use and most people tend to pick it up very easily.

Note that the numbers in $\{\ \}$ refer to Figure 1: The MovieMaker Interface.

Filming The basic principle of digital video recording is that each time the record button on the camera is pressed, an invisible 'mark' is made on the tape. When the camera's content is imported into MovieMaker it appears as a series of clips delineated by these marks. This means that pupils should be clear from the planning stage that they are filming a series of clips that they will put together to make their finished film. The process can be helped by using a storyboarding sheet to facilitate planning. You may find it helpful to use a digital camera to take still photographs for storyboarding. In general I recommend using a tripod for most shots (as this avoids 'camera shake') and only using the digital zoom for framing shots, i.e. not when filming.

Load MovieMaker First load MovieMaker by doubleclicking on the MovieMaker icon (which looks like projector reels). This can usually be found off the Start Menu, All Programs branch. This will load MovieMaker and the screen will look

Importing footage In order to be able to edit a movie, it is necessary to transfer the footage (clips) from the camera to the computer. This is

done by connecting the DV Out socket on the camera to the firewire port on the computer. Not all PCs come with a firewire connection, particularly slightly older or lower-spec (cheaper) machines. It is possible, however, to buy plug-in firewire cards, either PCI for desktop machines or PCMCIA for laptops.



Once the camera is connected, switch it to VCR or playback mode and wait. After a few seconds, Windows XP will note that it has detected new hardware and in time the video capture wizard appears. If this doesn't happen, then try closing down MovieMaker and re-loading. If still no success, try turning the camera off and on again, and if that also fails then you should check cable connections.

Following the instructions on the wizard prompts us to enter a name for the 'collection' of clips and specify the location to save them to. It is worth giving the clips collection a relevant name, as it is very frustrating later to be ploughing through lots of collections in order to find footage that you want to re-use. It is also worth making sure that all collections are saved to the same location on the computer as it makes file management easier later.

Clicking 'Next' and following wizard instructions prompts to choose 'Video Setting' which basically tries to balance quality (big files) with available disc space. The choices made here will depend on the final plan for the project (e.g. will it be exported back to tape or viewed using a computer?).

Clicking next again calls us to 'Choose capture method'. Selecting 'Entire tape automatically' rewinds the cassette and captures the footage, splitting into clips as it goes. Selecting 'Capture manually' allows us to choose when to begin and end capturing the clips. In general I use 'capture automatically' unless I started recording partway through a tape.

Review clips With the clips safely imported into our project, the next thing to do is save the project. This prevents the upset of having to re-import all the clips if the computer crashes! It is important to save the project regularly as the editing progresses. We can then review what is there. Each clip in the collection shows the date and time of filming. If we hover over the clip, a caption displays the duration. Clicking on any of the clips in the collection {2} highlights the border around it in blue. This also displays the highlighted clip in the main viewing window {1}. Clicking the play button under that window {3} plays the clip, as one might expect. The rectangular 'playhead' can be dragged back and forth using the mouse. At this point it is also possible to begin to split clips into smaller clips and to create still pictures from clips. These are done using the two buttons on the right hand side under the viewing

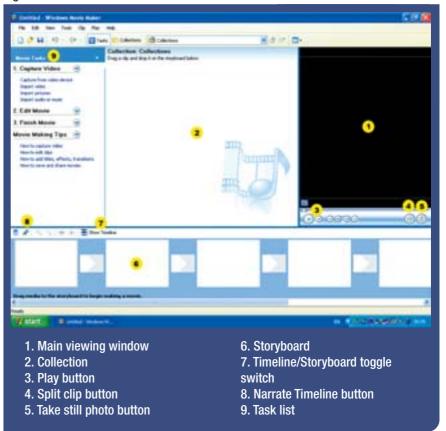
Sequence clips on the storyboard

window $\{4\}\{5\}$.

■ MovieMaker has two sequential linear views, known as 'the storyboard view' and 'the timeline view'. The user can toggle between the two views using the switch at the left of the screen below the task list {7}.

The basic principle of putting together a movie is that the clips are dragged onto the storyboard {6} (the strip along the bottom of screen under the viewing window) in the sequence that you wish to see them. They are dragged into place by selecting the clip you wish from the collection and then dragging into place on the storyboard, holding the mouse button down while dragging and releasing to drop the clip. This is repeated until the required clips are arranged on the timeline. Clips can be moved around within the timeline and they will reorder themselves. Clips can be used more than once as the package is 'non-destructive'. This bit is easier than it sounds – try it!

Figure 1: The MovieMaker Interface



Clicking on the 'Play' button plays whatever clip is highlighted in blue in the viewing window. In order to watch everything that is on the storyboard, simply click on the first clip in the timeline and then click Play. The play head will move across under the playing window, and as each clip on the storyboard is played it will be highlighted in blue.



Importing still pictures

Still pictures can be imported into the

collection and onto the storyboard. This
is done by clicking on the 'Import picture' {5} item in
the task list {9} and then browsing to the appropriate
location and double-clicking on the required file. This
allows the use of still images in the completed film
and also 'storyboarding' for planning purposes.

Audio

The soundtrack makes a great difference to any film, whether it is the atmosphere added by music or detail and description added by narration. In order to begin dealing with sound, we should first switch from storyboard view to timeline view using the button on the left of the screen just above the storyboard.

Next click on 'Import Audio or Music' on the task list and browse to the location of stored music on your computer. (Note: It is not possible to import music directly from a CD into your *MovieMaker* project – it must first be converted and stored electronically on the computer using *Windows Media Player* or something similar.) Having located the music to import, choose the file or files to import and click 'Import'. These files then appear as audio files in the collection.



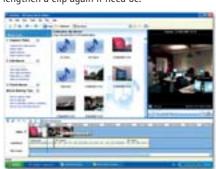
The clips can then be dragged down onto the audio track of the timeline.



It is also possible to record voiceover. Clicking on the microphone button {8} on the left of the screen just above the timeline opens the 'Narrate Timeline' window. Ensuring that a microphone is connected, adjust the level until speaking has moved the bar almost to the red. Now simply click 'Start Narration' to begin recording. Clicking 'Stop' prompts us to save after giving this narration an appropriate filename, and doing so places the voiceover clip in the collection and on the timeline.

Editing clips
Having arranged the clips along the storyboard, we often want to adjust the 'in and out points' or in other words to trim the clip so that any unwanted footage can be removed.

To do this we first highlight the clip in the timeline view, it doesn't work on the storyboard view. Next move the pointer to the beginning or end of the clip and hover until it changes from a hand to a red double headed arrow. Then click and drag the arrow to shorten the clip. The new first frame (or last if adjusting the end) is shown in the viewing window. Note that these changes are not destructive, so you can go back and lengthen a clip again if need be.



Titles

No film would be complete without some form of titling. This may be just an opening title shot or may include, subtitles, credits and so on. Now is the time to add these to the movie. Click on 'Make titles or credits' on the task list and then follow the instructions to decide where in the movie you would like titles to appear; then enter font, animation required and so on. Clicking 'Done' will then add the title, although this is not visible in the storyboard view. Switching to the timeline view does, however, show titles in

their own track. They can be lengthened or



Video effects
These are stylistic effects that can
be added to clip or series of clips
for effect. They include fades, speed changes and
even soft focus. To access them, simply click on
View video effects' on the task list.

The effects can then simply be dragged onto a particular clip in the timeline or storyboard view.



In the storyboard view, the star in the bottom left of each clip changes from grey to blue if an effect is present. An effect can be deleted by clicking on the star and then the delete key. Transitions

Transitions are effects that can be added when one clip changes to another. These can be very useful stylistically but can also completely destroy a quality piece of work when overused, creating a chaotic mess. Used sensitively, however, they do have a value.

First select the 'Video Transition' menu from the task list. Then choose an appropriate transition, preview it if required and then, as with effects, drag it down onto the timeline or storyboard between any two clips.



Finish movie
The final stage of the project is to convert the movie into a format that can be shared.

This is simply done by clicking on the 'Finish Movie' option in the task list and following the instructions to either export back to the camera (and from there to VHS if need be), burn it onto a CD or save it onto the computer. The only point of note here is that the movie is saved as an .avi file and as such can only be played by a limited range of applications. It can be played in *Windows Media Player*, for example, but not *QuickTime*.

And finally, grab the popcorn, get your friends and enjoy!

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