

## **Basic Digital Video Editing with VideoStudio**

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### **Introduction**

Video clips to support classroom instruction are becoming more common. They can be integrated into internet tools such as BlackBoard, or into PowerPoint presentations. For example, chemistry experiments can be demonstrated, physical therapy methods can be replayed and practiced in preparation for practicum, etc.

Video editing software allows you to transfer footage from your camcorder. Then the scenes can be arranged, special effects applied, images overlaid, animated titles added, voiceover narrations added, and background music added. (These are separated into tracks for each layer.)

### **Software Alternatives**

Ulead's Video Studio is one of many products that are available for video editing. These products differ in some features as noted in the table below. This is just a small listing of the software available.

<b>Product</b>	<b>Ulead Video Studio</b>	<b>Dazzle DVD Complete</b>	<b>Video Explosion Deluxe</b>	<b>Adobe Premiere</b>	<b>Pinnacle Systems Studio DV</b>	<b>Windows Movie Maker 2</b>
<b>Platform</b>	PC	PC	PC	PC	PC	PC
<b>Version</b>	7.0	n/a	n/a	6.0	7	2
<b>OS</b>	98 ME 2000 XP	98 ME 2000 XP	98 ME 2000 XP	98 ME 2000 NT 4	98	XP
<b>Min Drive Space</b>	500 MB	250 MB	Not specified	Not specified	150 MB	2 GB
<b>Min Processor</b>	Pentium III 450 MHz	Pentium	Pentium II	Pentium 300 MHz	Pentium 233 MHz	Pentium 600 MHz
<b>Min RAM</b>	64 MB	128 MB	128 MB	32 MB	64 MB	256 MB
<b>Price</b>	\$89	\$59 to \$89		\$136 - \$152	\$99	free

## **VideoStudio**

VideoStudio uses an easy step-by-step methodology to easily and quickly create a movie. All the tracks in your movie are organized into a video project file (\*.vsp), which contains all the video and audio information necessary to render your movie.

### **System and hardware requirements**

VideoStudio is one of many software packages that makes movie making simple. The current version is 7.0, and retails for \$89.95 (web download). VideoStudio was developed by Ulead, a company based in Taiwan (www.ulead.com). VideoStudio has the following system requirements:

- MS Windows 98, Me, 2000, or XP
- 800 MHz CPU speed
- 256 MB RAM
- 500 MB of hard disk space; 4 GB recommended
- Video for Windows or Direct Show compatible video capture card
- Windows compatible sound card
- CD-ROM or DVD-ROM drive

In addition, a video capture interface must exist to capture digital or analog input.

### **Digital**

A digital video camera or digital camera that will record video is assumed. To transfer the data to your computer, an IEEE 1394 capture card (firewire) card is necessary. This is usually connected to the camera with a cable, but may be wireless if Windows XP is used.

### **Analog**

If taking video from an analog device, it must be connected to the capture card with audio/video jacks or S-video. VideoStudio recommends that the analog capture card support RGB or YUV capture.

Other software and drivers must be installed to use VideoStudio, including QuickTime 6.0, RealPlayer 8.0, Indeo 5.1 (compression and decompression software), and Adobe Acrobat Reader 5.0. (The help manual is a PDF file.)

VideoStudio has improved dramatically from earlier versions (4.0 and lower). The software has many special effects and supports many of the popular file types. Ulead gets low marks by most reviewers for its telephone support, if you need to go beyond the help manual.

VideoStudio recommends that the DV tape be formatted prior to shooting video. This can be accomplished by recording the entire tape with the lens cap on. This will facilitate batch capture and accurate location of time codes.

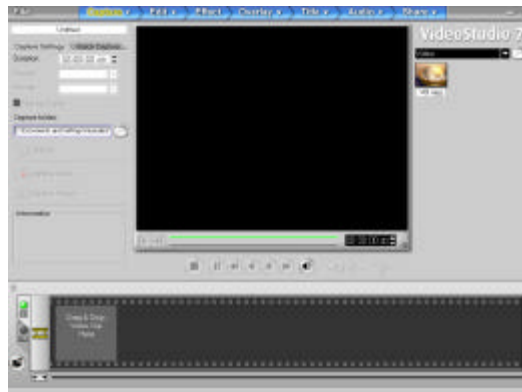
## Capturing Video

Video can be captured from a connected input device (digital or analog). VideoStudio automatically detects the capture settings. This step is very resource intensive and requires large amounts of disk space. Other programs should be shut down, and best results are achieved with a dedicated video hard disk.

Click on the capture menu item. When you start capturing/recording, there is a slight delay as the connections are made and recording begins – so you may want to position the tape a little prior to the actual spot where you want to record. It is easy to trim later on if you have captured too much. Leave the video camera power on until the clip has been captured.

VideoStudio offers scene detection, which will automatically break up your video into clips based on recording starts/stops, camera shifting, etc.

There are also several other considerations during capturing, such as file format. DV video offers 2 types, DV Type 1 (AVI type, one stream) and DV Type 2 (AVI, separate video and audio streams).



Video can also be captured to MPEG-1 or MPEG-2 formats. Video captured on machines with Pentium II, 300 MHz processors or less, with resolutions of 352 x 240 or less, should output MPEG-1 files. Otherwise, MPEG-2 format is recommended.

Data from analog sources can also be captured straight to WMV (Windows Media Video) formats. In all, 10 file formats are supported.

Options are also available to capture TV footage, split by scene, batch capture and capturing still images.

After the video is captured, the steps that are detailed on the following pages can be performed in any order (editing, effects, overlay, titles, audio). The preview window allows you to test out your editing and other changes, including a quick, lower quality look without fully rendering the video.

## Edit Step

Clips can be arranged, edited and trimmed during the edit step. Editing can be accomplished in storyboard or timeline mode. Click on the Edit menu item to access this feature.

Clips can be dragged and dropped to the storyboard. Clips can be trimmed there and transitions inserted.

The timeline can be accessed by clicking on the tab next to the storyboard. The timeline is useful for trimming and editing the clips, and accessing all available tracks.

The timeline is broken into Video, Overlay, Title, Voice and Music Tracks. Each track can be accessed by clicking on the track's icon.

Clips that have been put on the timeline can be trimmed by dragging the yellow trim handles on either side of the clip. Trims can be made frame by frame by clicking and holding down a trim handle, and using the left or right arrow key. The function keys F3 and F4 can also be used to set trim or mark in/out points.

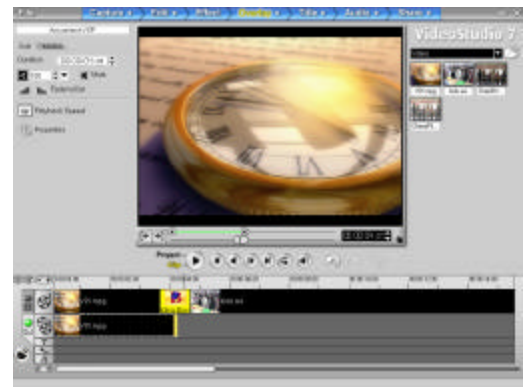
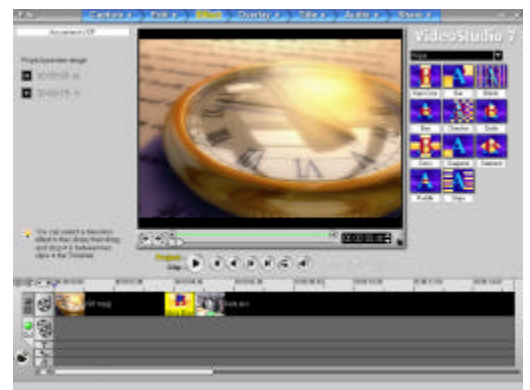
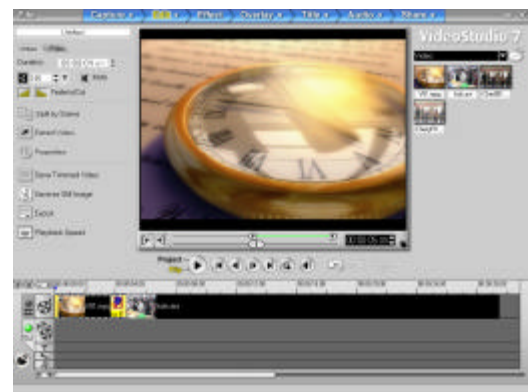
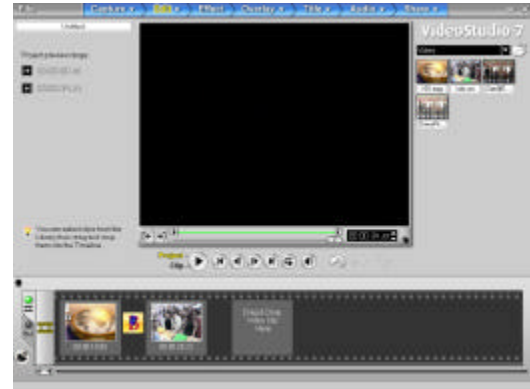
Video filters can be applied using the Edit Step. Filters allow you to change the clip's style or appearance. Dark videos can be lightened, or colors can be balanced. A maximum of five filters can be applied per clip. The filter effect is selected, and dragged and dropped on to the clip in the video track.

## Effects

Transition effects can be added to the timeline between clips. Thumbnail animations can be dragged and dropped to the timeline. Many different effects are available including 3-D, Build, Clock, Peel, Push, Roll, etc.

## Overlay

A clip can be superimposed over another one as a special effect in a movie. The clip can be selected from the library and dragged and dropped on the overlay track.



Clips added to the overlay track have an alpha channel automatically applied for transparency.

## Titles

Titles can enhance your movie in the opening, as subtitles, and at the closing. Text can be created and animated in any Windows True Type font, color and size.

Click on the Title menu item, then click on create title. The text is typed in the preview window. The text can be formatted and animated, as well as moved to a different position on the title track.

## Audio

Audio files can be used to set the mood for your movie. VideoStudio lets you add background music, as well as record narrations in addition to the initial video audio.

## Voice Track

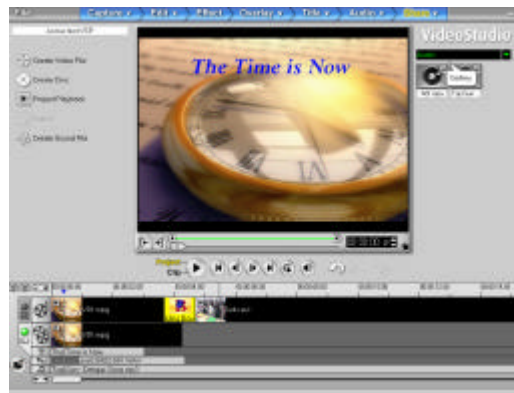
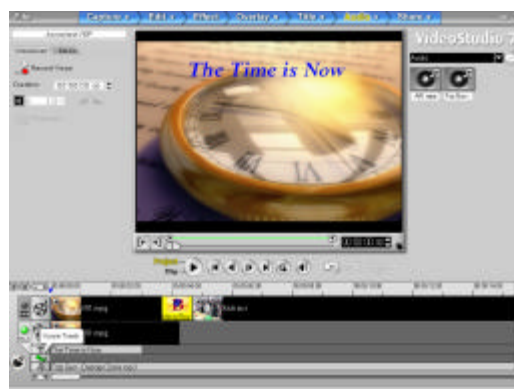
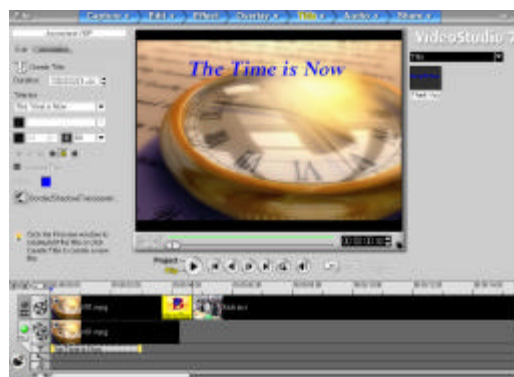
The audio track can also be used to record a voice audio track to allow you to narrate your movie. The audio/voice track can be selected and volume adjustments made. The recording is then started and stopped. The recording can be trimmed (using methods discussed previously) and moved to the appropriate space on the timeline. Short (10 – 15 seconds) recordings are recommended, to make it easier to re-record, move, and adjust the narrations.

## Music Track

Background music can be added from music files, or directly from CD's. Supported file formats include .mp3, .wav, and others. Music files can be dragged and dropped to the music track. Music can be faded in at the beginning or the end. The music can also be trimmed, in the same method as a video clip, to match to the video clip length.

## Share

Click on the Share menu item to access the options to create a movie or DVD. After the desired tracks are complete, the final movie can be created. Again, not all the tracks must be used. The creation of the movie is called rendering. Rendering may take time,



depending on the length of the clips and the tracks used. A new option of rendering changes only is also available.

Your movie can be output as a DVD/VCD/SVCD title, streaming Web page video, or an e-mail attachment. The movie can also be sent back to your camcorder or VCR.

## **Conclusion**

VideoStudio is easy to learn to use, and lives up to its tag line – “Movie Making for Everyone.” Even if you choose to use another product, such as Windows Movie Maker, movie making is fun and easier than ever. It only requires some additional equipment, lots of disk space, and your own creativity.

## **References**

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