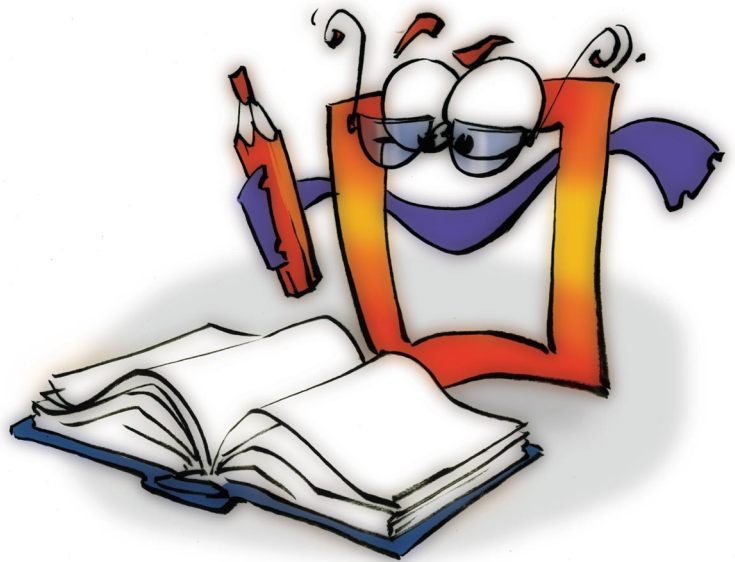


APP A



Glossary

APPENDIX A

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Effects

GLOSSARY

Foreword

The glossary contains abbreviated explanations of the specialist terms used in the booklets.

Specialist terms from video or computer technology and operating systems are not explained fully.

The glossary does not claim to be exhaustive and cannot replace specialist literature or dictionaries on video or computer technology etc. No liability is accepted for mistakes or errors.

1

16 Bit color depth. 65536 different colors can be displayed.

→ Color depth, → High Color

16 Bit

2

24 Bit color depth. 16,7 million different colors can be displayed.

→ Color depth, → True Color

24 Bit

3

32 Bit color depth. In addition to the colors an alpha channel with 256 levels of gray is saved.

→ Alpha channel, → Color depth, → True Color

32 Bit

3D effects can be applied to graphic objects which can be manipulated in 3D space. As a result the object obtains a spatial depth which is visible if the object is slightly rotated or tilted . → Effect

3D Effects



Manual



Tutorial



Reference



Effects

8

8 Bit

8 Bit color depth. 256 different colors available.
→ Color depth

A

Album

The MoviePack album acts as a container for various media. Objects, effects, transitions and behaviors of an animated object can be saved here. Drag & Drop is the basic mode of operation.

Album Window

The album window is as a rule a document window. It can be saved (file name.M3A) and used for other projects or by different users.

Aliasing

Aliasing is the general term for the disturbing effects that may be caused by sampling frequencies being too low or by laying two screens upon each other. → Antialiasing

All-In-One-Solution

MoviePack possesses all the prerequisites the user needs to be creative in the film production sector. All tools required for working with moving images are supplied and accessible in one single interface. (Video Compositing, Video Editing, Video Capturing).

Alpha, Alpha Channel, Alpha Mask

The alpha channel contains the transparency information of an image. The area and level of transparency can be controlled.

AMT, Adaptive Mesh Technology

3-dimensional video processing in real-time has been made possible through this new technology developed by AIST. The resolution adapts itself to the individual object and increases workflow considerably.

Animation

A MoviePack animation consists of animated objects and effects. Transitions can be freely manipulated and unlimited effects can be applied. Animations are saved in MoviePack as M3 files (file name .M3). The files contain all information on objects and effects used.



This is the smoothing of jagged diagonal lines in a computer picture, that leads to more photo-realistic images. Usually available through rendering options. → Aliasing

Antialiasing

A computer program that serves a specific purpose.

Application

Digital audio files that can be recorded and played back using a sound card.

Audio, Sound, Tone

A digital audio file.

Audio Clip

→ Compression

Audio Codec

AVI stands for Audio Video Interleave and is the conventional video format under Microsoft Windows. The image and sound information are interleaved in such a way that they are played synchronously.

AVI, Audio Video Interleave

B

The background is a fixed image or video. Its color and gradient can be altered.

Background

Object behavior determines the way an object will appear due to its position and rotation in 3D space as well as the application of any effects. A behavior can also be applied to another object by duplicating all effects applied to an object and then exchanging the original object for another one.

Behavior

Bitmaps, also called raster graphics, are representations consisting of rows of tiny dots known as pixels. Each pixel in the image corresponds with one or more bits and the number of bits per pixel determines how many shades of gray or colors can be displayed. A bitmap is dependent on the resolution. It contains a certain number of pixels which display image data. This is why a bitmap becomes less clear and ragged when shrunk or enlarged. Bitmaps are best suited to

Bitmap



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Effects

representing nuances in shading and color in photographs and painted pictures. → Vector graphics

Bluebox → Chroma Key

Brightness The level of white that is mixed in with an image.

Browser, Browser Window The interface between MoviePack and the files contained in the system. It gives the user a quick overview of all the existing files. Objects, effects and transitions can be dragged into the Timeline, the Canvas or an Album from the Browser. The Browser in MoviePack also has the added bonus of the “mouse-over” function. Position the pointer over an object for a short time and a little preview window will pop up. If this object is a video clip it will automatically be played with audio and can be trimmed before use. → Pre-Editing

C

Camera The camera is inserted into the Timeline in MoviePack like any normal object. By scaling, rotating and positioning the camera, movements like zooming in & out as well as perspective distortions can be simulated.

Canvas, Canvas Window The animation is displayed on the Canvas in MoviePack at the point in time where the Timeslider is positioned. Objects can be inserted, activated by the mouse and manipulated. Effects can also be applied and altered. All manipulations are immediately visible in the Canvas.

Capture → Video capture

Chroma Key Chroma keying is a technique in which specific colored areas of an image are made transparent. MoviePack has several chroma key effects.

Chrominance The color part (hue and saturation) of a video signal. → Luminance

Clip, Video Clip → Video



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Reference



Effects

Abbr. for coder-decoder. → Compression

Codec

Bit depth (8, 16, 24, 32 bits), determines the number of colors to be displayed in the image or video file format.

Color Depth

Different universal standards for describing the color of objects.

Color Model

RGB determines the respective share of red, green and blue in the color.

YUV is the color model which determines luminance values and color difference signals.

CMYK is used in printing and is a negative color mixing system - Cyan, Magenta, Yellow, K= key color which indicates the intensity of black.

The measurement for determining the intensity of the colors in a video signal.

Color Saturation

Colors in MoviePack are set in the color model HSB (hue, saturation, brightness) or in RGB (red, green, blue).

Color

Standard functions that can be carried out by a computer e.g. Copy, Cut, Insert, Delete, Duplicate, Undo/Redo etc.

Commands

Computer technology and the video and image processing sector are in a constant state of technological change. Newer versions of software (operating systems and applications) and hardware (PC, audio and video technology) have less support for older systems with time.

Compatibility

Compositing is often used for TV trailers, advertising productions or for special effects in feature films. It is basically simultaneous multi-layering of videos, image and audio planes. Compositing in MoviePack includes a freely scalable Live Preview in Realtime with OpenGL. Features include omnidirectional lights, cameras, complete manipulation of all parameters, unlimited number of layers which can be fully animated, alpha masking and 3D manipulation.

Compositing



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Effects

Compression, Compressor

Data compression is a technology which reduces irrelevant information in order to reduce its size. There are several different compression methods which reduce the volume of data while retaining the same information content. Loss-free compression methods (i.e. run-length encoding, RLE or LZW) must be differentiated from procedures with a high- compression rate which result in a loss of picture and sound quality as information is irretrievably lost e.g. MPEG, JPEG, MP3.

Configuration

The user can configure all components of an IT installation or EDP program after installation. Configuration of the hardware: Compilation and coordination of the different devices of a system to avoid any possible conflict or incompatibilities. Configuring the hardware also includes installing programs which create communication links between the different components (drivers).

Context menu

Instead of searching for a command in the standard menus, a right-click in a file, folder, window, title bar or another element opens a context menu. This menu contains the most frequently used commands for this element. In MoviePack the context menus for almost all windows contain setup commands for the chosen window.

Copy, Paste

With the commands Copy and Paste (Edit menu) objects, transitions and effects (including behaviors) can be inserted into certain positions on the MoviePack interface (Canvas, Timeline, Album).

D

Delete

There are two methods of deleting objects, effects or settings in MoviePack, either under **Edit/Delete** or the **Delete** key on the keyboard.

DIB Sequence

A numeric sequence of frames. Each frame is saved in an individual file.

Digitizing

→ Video Capture

Directory

→ Folder



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Reference



Effects

In MoviePack all windows can be docked to other windows at the edges. This guarantees a clear and uniform working environment. → FDI

Docking

Drag & Drop is the common way to manipulate files, images, text, icons thumbnails etc. on the PC. All these elements can be moved by keeping the left mouse button depressed on a selected element while moving the pointer (dragging the element) to another position. This function particularly facilitates the importing of objects from the Browser into the Timeline or Canvas and the application of effects from the Browser onto objects.

Drag & Drop

Control program. Software interface between any computer hardware device and the operating system on the PC. → Configuration

Driver

Any animated object including its behavior can be duplicated. The duplicate is placed beside the original and can be treated as an individual object.

Duplicate

E

Editing means the cutting and trimming of video films. MoviePack contains an extensive range of editing functions. In MoviePack editing is possible in both the Timeline and in the Double Monitor window at the click of the mouse.

Editing, Video Editing

Editing of clips direct from the Timeline or frame-exact editing in the double monitor window are possible in MoviePack. → Pre-editing

Alteration of objects (color, size, 3D deformation or appearance).

Effect

All the parameters of an effect can be controlled and manipulated in one window, the Effect Box. An effect is applied to an object by dragging a chosen effect from the Browser onto the desired object in the Canvas or Timeline. After the effect has been applied all parameters can be altered in the Effect Box.

Effect Box, Effect Box Window



Effect Group

To simplify matters similar effects in MoviePack are combined in different groups.

Export

To make an object that has been manipulated in one program available in another program.

F**FDI, Floating Document Interface**

FDI enables all windows to be freely positioned or floating. If the window is floating it can be freely positioned and scaled on the monitor. It can hide other windows and be hidden itself. → Docking

Field

To reduce video flicker each frame that makes up a video is split up into two fields, which are then displayed sequentially at twice the normal frame rate. This results in a much more flowing playback.

File Extensions

For the classification of files, documents and programs.

MoviePack runs files with the endings .M3', 'M3A', '.M3T' or '.M3W'; the file is opened as a document in the program.

Filter

→ Effect

Floating

→ FDI

Folder

Folders are Windows directories. All folders on computer drives or networks can be opened from the MoviePack Browser and objects can be inserted into animations.

Frame

A frame is an individual picture which makes up a video sequence.

Frame Rate

This is the number of frames per second in a video clip. PAL uses 25 f/s or fps (frames/second or frames per second) and NTSC uses 30 f/s.



Frames per second.

→ Frame Rate

Fps

The display of an image on the PC monitor. If the original image size is smaller or larger than the monitor, the image will be enlarged or reduced to fit.

Full Frame

Abbreviation for effect.

FX

G

The gamma curve is a corrective function for color, brightness or transparency and is described in more detail in the effect booklet 'Image Control'.

Gamma

H

16 Bit, 65536 different colors can be displayed. → Color Depth

High Color

HLS is a color model which alters the hue, luminance and saturation of an image or clip.

HLS

→ Plug-in structure

Host

HSB is a color model which alters the hue, saturation and brightness of an image. → Color model

HSB

The parameter which determines the wavelengths of light which are to be absorbed or reflected by the object. It is defined by the position on the standard color wheel and is also represented as an angle between 0 and 360. Hue corresponds to the common definition of color, e.g. red, orange, green etc.

Hue



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Reference



Effects

I

Image

Any form of graphic which can be seen on a monitor.

Intelli-Rendering

Intelli-Rendering is a technology developed by AIST which enables the play back of rendered clips. Thanks to this technology only the parts of clips which have been altered (by effects, animations and transitions) have to be re-rendered. This means re-rendering of entire clips is no longer necessary.

Interpolation

A mathematical procedure which estimates values of a function at positions between listed or given values. It is used, for example, for smoothing or reducing disturbing picture effects caused when scaling images or lengthening of clips.

J

K

Kb, Kb/s

Kilobit (1 Kb = 1024 Bit), Kilobits per second

KB, KB/s

Kilobyte (1 KB = 1024 Byte), Kilobytes per second

Keyframe

The animation of an object in MoviePack can be reduced to the positioning of certain changes in keyframes at a certain point in time. Each object must have a minimum of two keyframes: at the beginning and end. Any other keyframes are implemented at the exact point in time where the changes to the object by effects or movements (size and position in 3D space) have been made.

Keying

Keying is a technique in which specific colored areas of an image are made transparent. MoviePack offers several keying possibilities.



L

→ Track

→ Track

The process of editing footage that can only be accessed or played in the sequence recorded.

→ Non-linear editing

1. Logical link between a file extension (document) and the application which normally processes this document.

2. A pointer embedded in a document or application, which is saved as a file on the desktop or hard disk. The file icon contains a small arrow in the bottom left-hand corner. Double-click the icon to open the document or to start the application. → File extensions

→ Preview

Luminance of a video signal. → Chrominance

M

Several independent windows which contain the same or different information can be opened simultaneously in the program. Information can be interchanged between the windows.

MCI deals with the recording and output of multimedia files.

Windows is the Microsoft operating system. Windows 95 is the successor of Windows 3.11, which is simply a graphic user interface for the MS-DOS system, or in other words an add-on. Windows runs on

Layer

Levels

Linear Editing

Links (shortcuts)

LPR, Live Preview in Real-time

Luminance

MDI, Multi Document Interface

MCI Media Control Interface

Microsoft, Windows, DOS



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Tutorial



Reference



Effects

all IBM compatible computers (not on Apple Macintosh) and is used on Intel compatible processors.

Monitor, Monitor Window

The double monitor window in MoviePack allows frame-exact editing of video material. → Editing

MPEG, Motion Picture Expert Group

Body which generates standards for digital video compression and audio. → Compression

Multimedia

Multimedia is communication that uses any combination of different media. Multimedia may include text, spoken audio, music, images, 2D and 3D graphics or animations and video. The large amounts of data required for computer multimedia files make CD-ROMs a good option for storage; but there are other ways of receiving multimedia communications, such as the World Wide Web. Multimedia programs are often interactive, and include games, sales presentations, encyclopedias, and more.

N

Non-linear Editing

Instantaneous random access and manipulation of any frame in any sequence. Editing or postproduction of a video on a PC is also known as off-line editing. → Linear Editing

NTSC, National Television Standards Committee

NTSC (60 Hz and 525 lines, 60 fields and 30 frames per second) is a popular standard for color picture broadcasting developed in the USA. NTSC is used mainly in the USA, Canada and Japan.

O

Object

The animated object in MoviePack consists of its content and behavior. The type of object is determined by its content (movie, image, sound).

Object Behavior

→ Behavior



The content of an object can be images, videos, sound, graphics, 3D objects or text. The content is not altered during animation. The behavior determines the different ways in which the animated object is displayed.

→ Linear Editing

→ Non-linear editing

OpenGL is the standard for image display acceleration on the computer screen. Although many graphics cards already offer OpenGL acceleration, some do not support all OpenGL commands and these are often limited to game applications. Furthermore, acceleration is dependent on screen resolution and on the amount of RAM available.

Options are settings which determine, for example, how the interface or parts of it (Canvas, Timeline, Browser, etc.) should look or the render quality and format. User defined settings can also be saved in schemes.

P

PAL operates at a frequency of 50 hertz, 25 frames, 50 fields and 625 lines and is the predominant TV standard in Europe.

The path the object follows while the animation moves.

File format for Adobe Acrobat Reader

A picture element or picture point. A pixel is the smallest element within a raster image.

The shape of a pixel depends upon monitor settings, under certain settings pixels are not square e.g. full PAL 768 x 576 and DV PAL 720 x 576 produce an identical image size. → Pixel

Object Content

Off-line Editing

On-line Editing

OpenGL

Options

PAL, Phase Alternating Line

Path

PDF, Portable Document Format

Pixel

Pixel Aspect



Manual



Tutorial



Reference



Effects

Pixel Graphics

Unlike vector graphics, where the color is calculated at a certain point inside the image, each pixel can be assigned a different color in pixel graphics.

Plug-in

Extension to software. Plug-ins can change, increase or update the features of a software.

Plug-in Structure

MoviePack has been developed as a plug-in host from the outset. This means it accepts both its own additional modules and those of third-party manufacturers.

Postproduction

Postproduction is the phase of post-editing videos and films. It comprises of steps such as cutting, effect editing and graphical editing.

Pre-Editing

Using the mouse-over function in the Browser window a preview of a video or audio file can be seen, heard and then trimmed.

Preview, Preview Window

The Live Preview in Realtime ensures that every change and manipulation is immediately visible in the preview window with no time-consuming rendering. The preview window is freely scalable. The user can work substantially faster and there is no need for additional hardware. This fantastic feature has been made possible by the key technologies developed by AIST like QPM and AMT. The preview is available in 24 Bit color.

Project, Project Management

Project management in MoviePack means the interface can be configured to suit the user's individual needs. After installation MoviePack appears in default setting. The position and size of windows can be altered. The current settings will be reloaded the next time you start MoviePack. Settings can be saved in a project file (filename .M3W) for later use or on different workstations.

Proxy

In MoviePack image files are cached, i.e. the images are saved on the hard disk to accelerate the preview. By clicking on the MoviePack icon on the task bar the M3-Import-Export-System dialog box appears, where the settings can be altered.



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Reference



Effects

A server that provides access to files from other servers by retrieving them either from its local cache or from the remote server. You can use a proxy server to pass data between your internal network and the Internet. A machine on your network sends a request to the proxy. The proxy sends the request to a server on the Internet.

Proxy Server

Q

QPM, developed by AIST, is a software based technology that isolates MoviePack from the hardware. QPM then manages all communication between MoviePack and the available hardware. As a result of this technology the tasks required by the software are equally distributed among the available processors. Where hardware is used to its full capacity. The more processors used, the faster the processing.

QPM, Queued Processing Management

→ Compression, → Resolution

Quality

QuickTime is a video format which was originally developed for Apple Computers but can now be used on Microsoft. Used for processing, compression and play back of audio, graphics or videos. → Compression

QuickTime

The use of two or more disk drives instead of one disk, which provides better disk performance, error recovery, and fault tolerance, and includes interleaved storage techniques and mirroring of important data.

RAID, Redundant Arrays of Independent (Inexpensive) Disks

The working memory of the computer. RAM is the memory used for storing data temporarily while working on it, running application programs, etc. 'Random access' refers to the fact that any area of RAM can be accessed directly and immediately, in contrast to other media such as a disk drive. RAM is called volatile memory; information in RAM will disappear if the power is switched off before it is saved to disk.

RAM, Random Access Memory

→ Bitmap

Raster graphics



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Tutorial



Reference



Effects

Recording, Capturing, Digitizing

Conversion of analog input (audio, video, image) from an appropriate source (microphone, scanner, camera, player, ...) to digital format which is saved on the hard disk or in RAM.

RGB

Red, Green, Blue → Color model,

Rendering

Rendering is the process of calculating frames to create realistic images. The desired parameters can be adjusted in the Render Setup.

Resolution

The size of an image. For printing the resolution is quoted in DPI (dots per inch). This information is completely irrelevant for video work.

S**Saturation**

→ Color Saturation

Schemes

In MoviePack individual schemes for important settings (options) like Canvas or Render Setup can be saved. Suitable settings for different schemes can be found and reused quickly and easily

Scrubbing

Audio Scrubbing is possible in the Preview. If the Timeslider in the Preview is moved back and forth, the individual beat in each frame can be heard.

Settings

→ Options

Shader, Shading

After application of surfaces and textures to a wire frame model, the shader calculates the final appearance of the model taking light sources and surface interaction into account.

Shortcuts

Keyboard combinations that are used to execute commands in the application e.g. Ctrl+S - save. → Links

Sound

→ Audio



→ Effect, → Plug-in

Start button on the Windows task bar.

T

Click on a tab on an index card to open the relevant folder or card.

An image that is applied to a 3D surface.

Digital information (hour, minute, second, frame number) of each individual frame of a video. Depending on the device, frame-exact definition, play back and editing of a clip is possible. For analog recording the following timecodes, amongst others, are used: RCTC (Rewritable Time Code for Consumers), SMPTE (Society of Motion Picture and Television Engineers). In MoviePack the Timecode appears in the Effect Box, Timeline, Timegraph, Preview and in the Monitor window.

The Timegraph window gives an overview of the behavior of an object. Keyframes represent the changes made to an object.

The Timeline window gives a chronological view of all objects in the animation. Objects and effects can be inserted directly into the Timeline from the Browser and clips can be directly edited here.

The Timeslider controls the time display. It can be moved using the mouse.

The title bar of a program shows the name of the window (Browser, Timeline, ...) or the name of the document which is being worked on in the window (Animation, Transition or Album). On the far right-hand side of the title bar are the Minimize, Maximize and Close buttons. A click on the window icon or a right-click on the title bar opens a context menu where the window can also be adjusted.

Special Effects

Start

Tab

Texture

Timecode

Timegraph, Timegraph Window

Timeline, Timeline Window

Timeslider

Title Bar



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Effects

Title, Text	A title can be the name of a film, the title strip or the credits of a film etc. MoviePack has several different text generators.
Tone	→ Audio
Tool Tips	Tool Tips give a short description of the control elements (icon, button, ...) in the status bar or of an element when the mouse is positioned over it. Also called quick infos, help balloons, pop-up help etc.
Track, Level, Layer	Every scene consists of several transparent tracks (levels, layers). Objects are inserted into tracks in the Timeline. Each track can contain an unlimited number of objects.
Transformations	The alteration of an objects geometry (aspect ratio, size, position and rotation in 3D space). The object can be manipulated using the mouse in the Canvas. In the Effect Box the parameters can be altered using sliders or numeric input.
Transitions	Transition from one scene to the next. The most common transition is the hard cut. In MoviePack there are many pre-made transitions available which can be easily altered and adjusted with the help of effects.
Trimming	→ Editing
True Color	16,7 million different colors are displayed. → Color Depth

U

V

Vector Graphics	Vector graphics consist of mathematically defined lines and curves, so-called vectors and have a definite advantage over bitmaps. The advantage is that it is possible to change any element of the picture at any time since each part is stored as an independent object whereas once something in a bitmap has been overwritten it cannot usually be retrieved. They are independent from resolution and are not defined by
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Manual Tutorial Reference Effects

a certain number of pixels. They can be scaled to almost any extent without becoming unclear or stepped at the edges. Vector graphics are suitable for text and graphics like logos or technical designs which require clear contour lines in every size. Vector graphics as well as bitmaps are displayed on the monitor as pixels as the monitor display is made of a raster of pixels. It makes sense to edit vector graphics first because of the good scalability and small memory requirement and then to transfer them into a bitmap before insertion into a video.

Files containing digitized recordings or rendered animations.

Video, Video Clip

Digitization of graphic, video and audio material from an external source (microphon, scanner, camera, recorder, ...) and digital storage on hard drive or in RAM.

Video Capture

A board for digitizing and playback of rendered animations on the PC

Video Capture Board

The Video Control window shows a preview of the clip. It is recommended to render longer sequences in the Video Control window as the Live Preview in Realtime may become overloaded. Intelli-Rendering saves time as only the changes have to be re-rendered. Direct output of animations onto an external monitor is possible if the hardware (video board) is compatible.

Video Control, Video Control Window

When using a virtual camera in MoviePack, a viewfinder image shows what is seen through the virtual camera lens.

Viewfinder Image

W

Animations, transitions and albums are processed in windows. It is possible for windows to overlap other windows.

Windows

X

Y

Z



Manual



Tutorial



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Effects



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Reference



Effects

