MOVIE PACK

TUTORIAL

MoviePack

BETATEST

Tutorial

AIST - Animated Image Systems Technology GmbH

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AIST - Animated Image Systems Technology GmbH

Mobil-Oil-Str. 31

84539 Ampfing

Tel.: ++49 (86 36) 9 83 50

Fax: ++49 (86 36) 98 35 22

Internet: http://www.aist.com

E-Mail: beta@aist.com

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Contents

This tutorial will teach you step-by-step how to operate MoviePack. Once you have worked through the individual chapters, you will be able to effortlessly edit your videos with MoviePack.

TUTORIAL

1Adjusting the Interface

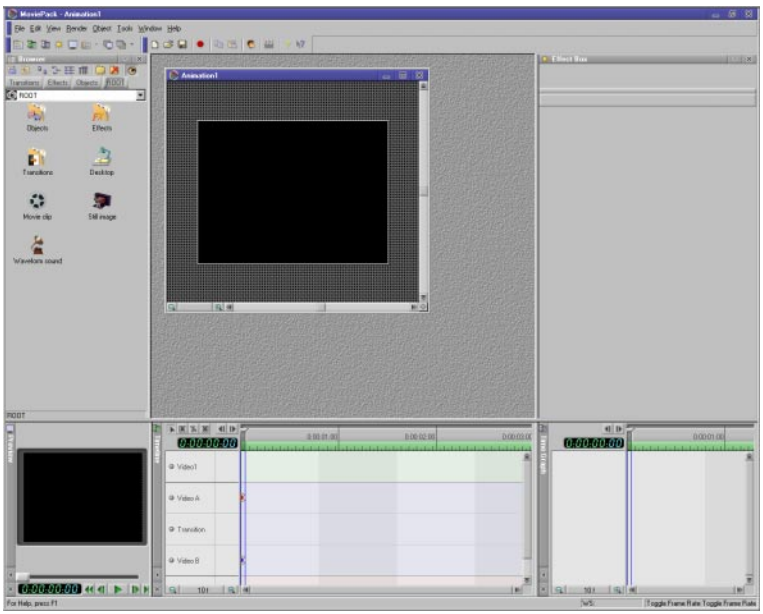
Why and how to adjust the interface

Workspace

With MoviePack, you can save the different configurations of your **Workspace**. This way, you get a better overview, which helps you to complete your projects faster and more efficiently. The following examples will show you how to custom-tailor your **Workspace** to suit your tasks.

After you have started MoviePack, the program automatically opens a new animation. The **Workspace** – defined as the space where your projects are created - is displayed with all its default-settings.

Not all program windows are open here, only those necessary for you to start a new animation, so you can proceed right away. You will soon notice that there is no such thing as a sufficiently big monitor. Depending on the state of your project, not all program windows are needed at the same time.

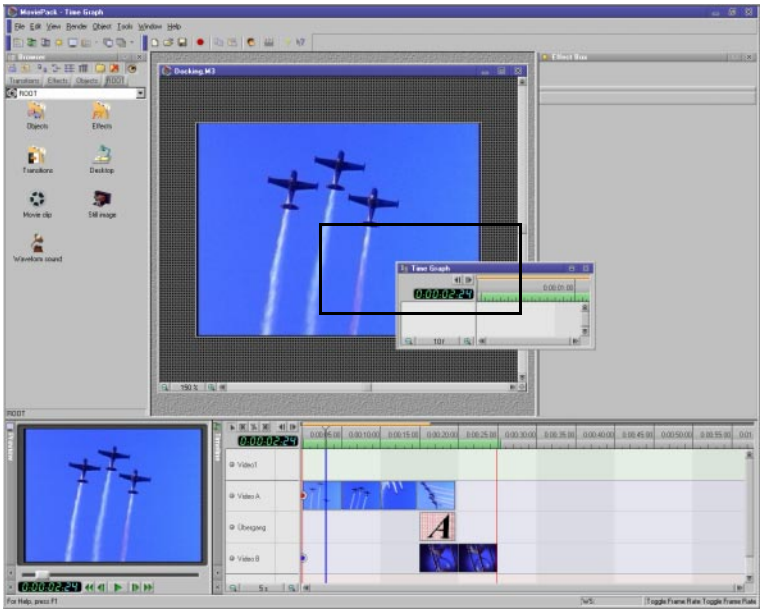


The **Workspace** with its default-settings: The largest section is taken by the Canvas, below it you can see the video tracks.

MoviePack features two different types of program windows:

- "Docked windows" and

- „Floating windows".



Freely movable:
„Freely moving windows" can be moved and docked any way you like. This way, you can adjust the interface to meet your demands.

Docked windows stick to each other. They can be enlarged but not moved. „Fixed windows" determine the size of other fixed windows.

Floating windows can be moved and, if you have activated them, overlap other windows at times. By releasing them, you can change the basic position of fixed windows and adjust them according to your requirements.

Docking

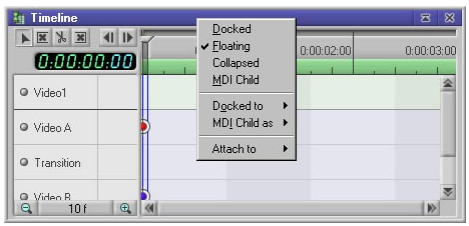
MoviePack defines the fixing and releasing of windows as „docking". When releasing them, the program supports you with an invisible hand and automatically adjusts the correct size for docking with other „fixed windows". Mostly, it is preferable to select a **Workspace** with docked windows, because you don't have to adjust to different motion paths all the time. However, should you be so fortunate to be able to work with

two monitors at the same time, you can design a more ergonomic **Workspace** by „undocking".

Positioning windows takes place as follows:

- Open the sample file „Samples/Desktop/Docking.M3".
- With the right mouse-button, click onto the **Timeline**.

Now the selection menu **Allow Docking** or **Hide** appears.



Windows can be docked, floated, collapsed, or ... .

- Click onto **Allow Docking**.

Timeline

The **Timeline** is released from its fixed windows environment and turns into a freely floating, active window. The previously bordering windows adjust in size. You can now move the window as you like.

- With the right mouse-button, click onto the **Timeline**.

The selection menu **Allow Docking** or **Hide** appears.

- Click onto **Allow Docking**.

Keep the mouse-button depressed on the title bar of the window and move it to a different position.

Positioning help by means of thin lines

- Depending on their position in the **Workspace**, MoviePack will show you with thin lines where and how it would position a window, thus helping you with your selection .
- Release the window.

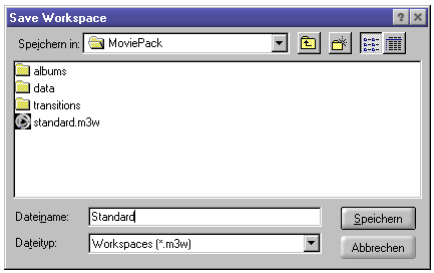
It will assume its position, while at the same time moving the other windows accordingly.

This way, you can design your **Workspace** the way you like it best.

MoviePack features a **Workspace-Manager**, which helps you to save the different Workspaces, enabling you to call them up at wish:

- Click onto **File** in the menu bar
- Click onto **Save Workspace as**

A dialog window appears for saving the **Workspace**.



Besides the default-settings, you can save as many **Workspace**s as you like.

- Click onto the topmost entry in the list

The field is activated.

- Enter a name for your configuration.
- Click onto **Save**.

In order to link these **Workspace**-settings with your project, you will be prompted to save it.

- Enter the MoviePack file name

You can now call up the saved setting via the menu selection **Open Workspace** in the menu **File**.

Adjusting the editing-surface

Storyboard

Place clips, images, transitions and sounds in the first line of the **Timeline**. Put your sources in the desired order. Normally, it is more efficient, time-saving and less tedious to record the course of a project in a storyboard first. In the storyboard, you establish the course of your film prior to working with MoviePack.

In „Samples/Storyboard.doc" you will find a sample file which will support you during the creation of your film project. The storyborard is a vital assistant, especially for long films with a large number of sources. This way, you determine the consecutive placement of the different scenes.

ⓘ Editing in the **Timeline** differs from the storyboard insofar as you are able to place sources in the **Timeline** not only consecutively but also simultaneously.

In a film with sub-titles, for example, it is vital that the translated text appears simultaneously with the spoken word. Therefore, the video clip and the text have to be placed above each other.

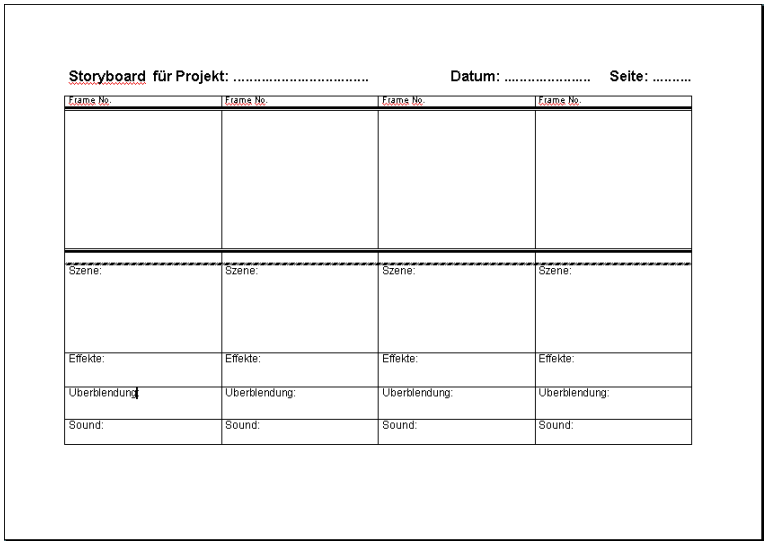
That's why the **Timeline** needs as much space as possible in the **Workspace**, both vertically and horizontally, so that editing is clearly strucured. In order to adjust the **Timeline** to these requirements, proceed as follows:

▶ Start the program.

MoviePack will open a new animation with the default-settings for the display of the program windows.

▶ Open the sample file „Sample/Desktop/Editing.M3".

You will see that the **Timeline** on the bottom right does not display the entire project. Above and to the right, there are also sources, which can not be seen this way.



The **Timeline** needs to be adjusted befo it can display the entire project.

- ▶ Move the mouse cursor to the left-hand corner of the **Timeline**.

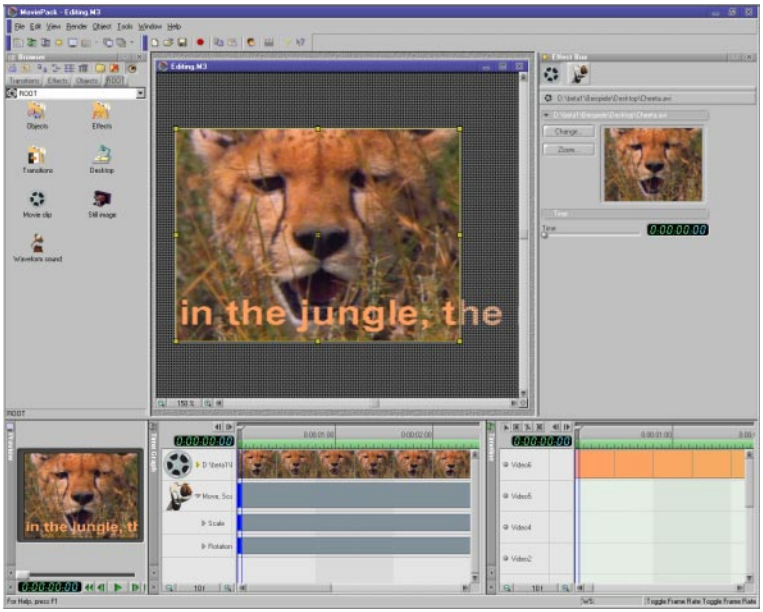
The cursor turnes into the **Move** symbol.

- ▶ Pull the corner to the left, while keepping the left mouse-button depressed until the window covers about 75 pecent of the screen.
- ▶ Move the mouse cursor to the upper corner of the **Timeline**.

The cursor turnes into the **Move** symbol.

- ▶ Pull the border up while keepping the left mouse-button depressed until the window covers about one third of the screen.
- ▶ Press the **Frame Rate**-button in the **Timeline** and change the display to 10f

10f stands for 10 frames and means that each partial line of the **Timeline** displays 10 images of the video sequence.



The entire project can be seen horizontally and vertically in the **Timeline**. The colours of the interface can be adjusted individually.

Adjusting the trimming interface

When you render video clips, beginning and end will rarely fit exactly. That's perfectly normal. Even professionals will record several seconds „too much" at the beginning and the end, because it is easier to trim off excessive footage without loss of quality than extending a clip.

In order to achieve the right transitions from one video to the next, you should record several seconds excess footage at the beginning and at the end of the clip when saving it to your hard disk. These sections of the clip are called „trimming sections".

Trimming

While you are writing the storyboard, you should already have a pretty good idea what the finished video is supposed to look like. However, you will rarely know at this stage, whether and how the transitions of the individual scenes will fit together in detail. Therefore, trimming, meaning the adjustment of the start and end times, is decisive for the quality of the finished results.

With the **Monitor**, you adjust the trimming sections of the clips. In the blue (right) window, you can see the track of the blue marker. Because the blue marker doesn't point onto the clip section, you cannot see a preview in the blue **Monitor**.

MoviePack will help you with this task with an individual program window: the **Monitor**. Together with the **Timeline**, it offers the possibility to adjust the trimming sections of the clips easily and exactly.

In the default-settings, MoviePack does not display the **Monitor**.

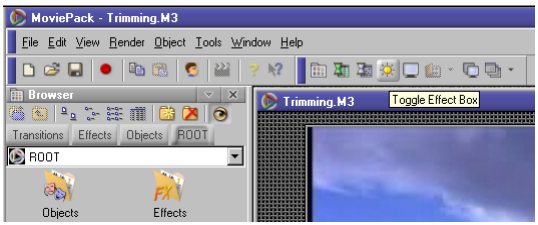
The next steps will show you how you can adjust the interface for trimming.

- Start the program.

MoviePack opens a new animation with the standard settings for the display of the program windows.

- Open the sample file „Samples/Desktop/Trimming.M3".
- Adjust the **Timeline** as described in the last chapter.
- With the mouse cursor, move to the **Sun**-button in MoviePack's icon bar below the menu bar.

A tool-tip called **Toggle Effect-Box** appears.



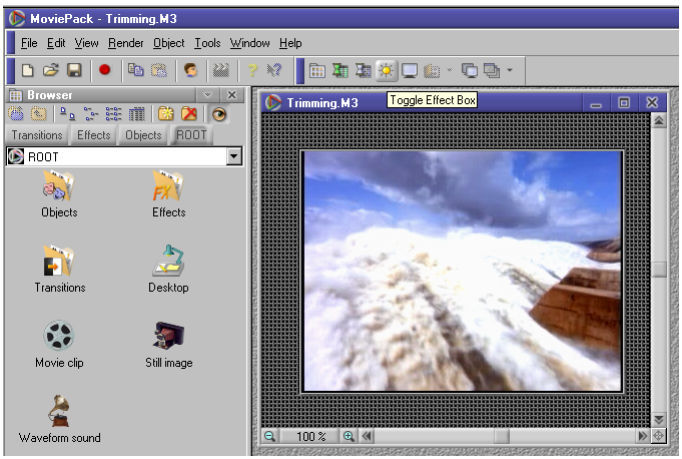
Create more space on your **Workspace** by closing unnecessary windows.

▶ Click onto the button **Effect-Box**

The **Effect-Box** on the right side of the **Workspace** disappears.

▶ Move the mouse cursor to the button with the two monitors in the icon bar.

A tool-tip called **Toggle Monitor** appears.



Turn the **Monitor** on in order to exactly adjust the trimming sections.

▶ Click onto the **Monitor**-button.

Monitor

The **Monitor** appears. It differs from the other open windows by being freely moveable.

▶ While keeping the mouse-button depressed, grab the **Monitor** on the top bar and pull it to the now fee space of the **Effect-Box**.

The **Monitor** can be freely moved and enables the otimal adjustment of video clips.

Now the **Workspace** is optimized for trimming. Save your **Workspace** with an unmistakeable name, for example „WS-Trimming".

Prepraring the compositing-interface

„Compositing" means: mixing the most different image sources to form a composition. A real challenge for the real video artist.

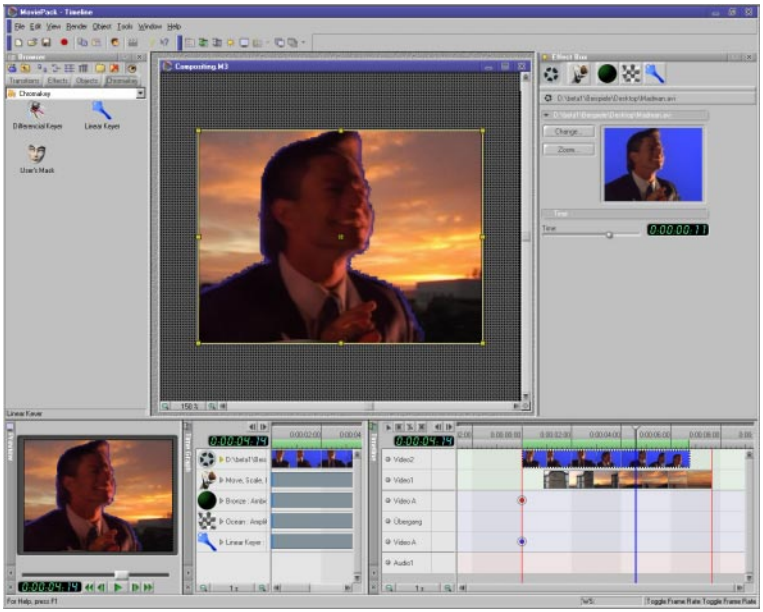
Compositing - the trend

These days, compositing is extremely important in the TV-sector. Broadcasters like PRO 7 or MTV have achieved a high recognition value with sophisticated compositings. All in all, compositing is the trend of the future in the film and video sector.

For compositing, MoviePack features possibilities which by far exceed the extent of this tutorial - so many, that it is quite impossible for anyone to ever fully utilize all options.

Placing clips simultaneously

As previously mentioned, the simultaneous placement of the clips requires sufficient vertical space in the **Timeline**. That's why the same conditions apply for the adjustment of the windows as with editing: the more space you have available, the better it is.



MoviePack's virtual studio: With chromakeying you can merge worlds! Here, the cut-out speaker with the sunset of the background- clip.

In comparision with editing, compositing results require the application of effects. Effects are processes which change the content of images. You will remember the virtual studios on TV, where an anchorman is placed in an artificially created environment. Here, two video sources are mixed with an effect, whereby all pixels, which are not part of the speaker, are filtered out.

Realtime-keying

With the news in television studios, this takes place in realtime, not retospectively. This realtime-keying can only be achieved by extremely powerful hardware associated with the corresponding costs. However, the principle is the same for both realtime-keying and retrospective editing. With the **Keying**-effect, the uniformly blue or green colored background in which the anchorman is located is recorded and made transparent. This way, the underlying, artificial environment becomes visible. Keying is just one of the many effects in MoviePack, which make it possible to create sophisticated and phantastic compositions.

In compositing, you mainly work with the **Effect-Box** and the **Timegraph** as well as the **Timeline**.

Keyframes

The **Timegraph** has an especially important function in editing and compositing. With it, you regulate the strength and the speed of effects and other source alterations by means of „keyframes“.

In the following steps, you will learn how to adjust these program windows to meet your requirements.

- Start the program

MoviePack will open a new animation with the default settings for the display of the program windows.

- Open the sample file „Samples/Desktop/Compositing.M3“
- Adjust the **Timeline** until it covers about 50 % of the screen width and about one third of the height.

Controlling the course of an image sequence

On the lower part of the screen, you will immediately see that **Timegraph**, **Preview** and **Timeline** share the screen width. You only need the **Preview** in order to watch the course of an image sequence. You can also see the individual changes to individual images in the animation window, so you can often do without the **Preview**.

- Move the mouse cursor to the **Monitor**-button in the icon bar.

The tool-tip **Toggle Preview** appears.

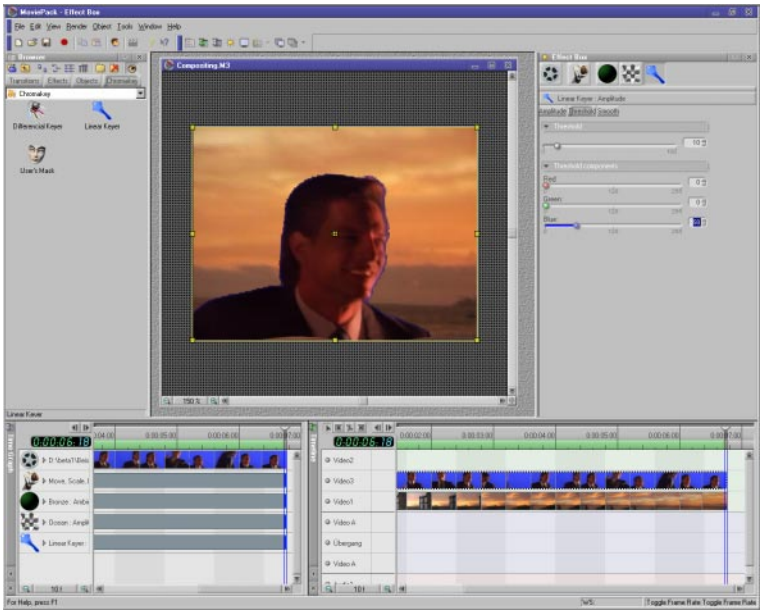
- Click onto the **Preview**-button.

The **Preview** disappears. The **Timegraph** automatically adapts itself in size so you get a good overview of **Timegraph** and **Timeline**. If need be, change the frame rate for a better display.

The buttons in the icon bar act like switches. If you need the **Preview** back, click onto the **Preview**-button again and the window re-appears.

The **Timegraph** reduces itself to its original length.

Now you have adjusted the **Workspace** for compositing.



The **Compositing-Workspace** doesn't need the **Preview** and the **Monitor**. At the same time, it provides access to all important tools.

Adjusting the titling-interface

Intros and final credits in films

„Titling" means the integration of text information in the video. Good examples for titling are sub-titles or intros and final credits in films. Even or especially in compositing, it is desirable to apply texts and numbers as stylistic means.

Scrolling

Texts can be applied fixed or moving. Sub-titles, for example, are mostly applied fixed. Here it is important that the viewer can comprehend the context quickly. This is more difficult because of movement. Final credits however, are typically displayed as scrolled texts. Scrolling helps the viewer to read longer texts more comfortably and harmoneoulsy integrates itself into the end of the film, which wouldn't be possible with successive text pages, for example.

According to your requirements, MoviePack's text functions feature extensive editing fuctions. They all have in common that they do not have

their own program window but are supported by the **Effect-Box**. You generate the titling interface as follows:

- ▶ Start the program

MoviePack will open a new animation with the default settings for the display of the program windows.

- ▶ Open the sample file „Samples/Desktop/Compositing.M3"
- ▶ Adjust the **Timeline** as previoulsy described in the compositing example.

ℹ Because speed is especially important for text movement, you need access to the **Timegraph** during titling.

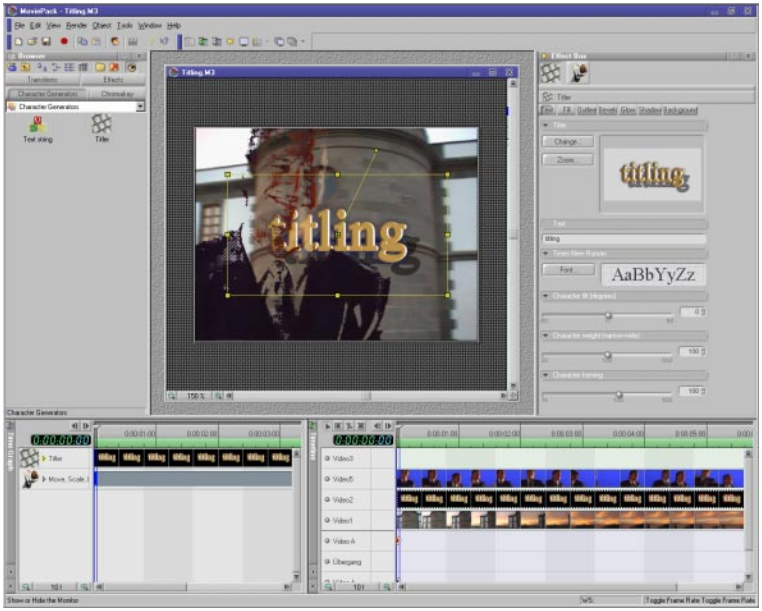
- ▶ Click onto **Objects**in the **Browser**-Window.
- ▶ Double-click onto **Character Generators**.

Text-options

Here you have the effects **Text string** and **Titler** at your disposal. The latter one offers extensive text entry and adjustment functions, among others the generation of 3D-texts. **Text string** is suitable for the entry of simple texts for sub-texts or image headlines.

- ▶ Double click onto **Text string** or **Titler**.

MoviePack will provide a new video track as well as a standard text in the animation and the **Browser**-Window. The editing functions for the generation and alteration of texts appear in the **Effect-Box**.



Only the necessary options appear in the titling interface: the text editing functions, the **Timeline**, the **Timegraph** as well as the **Browser**-Window with the titles.

2 Embedding sources

File formats

MoviePack doesn't just allow working with sources in all common file formats. It furthermore offers special forms which enable the platform-comprehensive data exchange between different operating systems. Whether you have generated graphics and QuickTime-movies on the MAc or high-end animation sequences on a Silicon Graphics Workstation – the large number of file formats supported by MoviePack ensures that there will definetely be no conversion-difficulties during the generation of your films.

But especially this babylonic variety of digital file formats makes it necessary for you to think about the sources you want to tie into your project prior to working with MoviePack.

Procedure for embedding sources

Output-formats

The first question which arises when embedding sources is simple - but profound: which file-format do I choose for which output-format? The decisive factor for that is the output-format. Digital video editing encompasses different target sectors. The movie industry and TV are traditionally the most known application sectors. But with the expansion of the Internet and other new media, like multi-media CD-ROM and DVD, more and more possibilities result for digital video editing. Last but not least, the dramatical price decrease of powerful hard and software have now also opened the doors for digital video editing in the home sector.

Resolutions and television norms

Depending on the application field, you will work with different resolutions and rates. In the TV sector, these conform to the corresponding television norm. In Europe, television stations broadcast mainly in PAL-standard, in France in SECAM. Both have a resolution of 768 x 576 pixels in semi-frame format and a repetition rate of 25 frames per second. Other countries, among them the USA, support the NTSC-format. Here, the resolution is 640 x 480 pixels with a repetition rate of 30 frames. To be exact, the rate isn't exactly 30 frames

per second but 29.7 frames per second. The result: a video editing program always has to leave out one frame during rendering in order to correct the time. These are the so-called „dropped frames".

Semi-image technology: illusion through shifted rows

The semi-image technology is still a relict from the beginnings of television. By a rapid succession of images, the image sequence appears to be moving for the viewer. This optical illusion appears to be even more fluid the higher the speed of the images is set.
Due to the fact that the scanning rate of television tubes was limited for a long time, the developers applied the following trick: a TV vertically scans the screen in rows. By shifting of each second row, meaning half the image is shifted into the next one, the repetition rate was doubled, which, however, resulted in a loss of quality.
But this is made up by the fluid and calm display of the film. With projects for television, you have to take this fact into account under all circumstances and render your films in semi-image format. Otherwise, movement in the clip will be abrupt and flickering.
MoviePack suports this technology.

HDTV

Meanwhile, technological development has advanced greatly. High Definition Television, in short HDTV, works with a repetition rate of 100 Hertz, thus greatly increasing the image quality. The 16:9-standard with it's wide screen is much more suitabe for human perception. Digital signal transfer via satellite or cable enables an absolutely error-free reception. The television industry is on the way to a completely different future at the beginnning of the next millennium. By supporting all these new television-norms, MoviePack is well equipped for the run!

Error-free, screen-filling video playback on PC

For computer-based video, a whole different set of prerequisites have to be met. Up until recently, video playback on PC was limited to a very small display size. Now, more and more new standards offer constantly enhanced playback-options. AGP-graphic boards in connection with compression methods like MPEG-coding or DirectX offer error-free, screen-filling video on PC.

Transmission speed

For playing back MPEG, AVI or QuickTime-files, the internal transmission speed from the data carrier to the monitor plays a decisive role. Hard drive, data bus, processor and graphic board should be capable of handling data flow of about 3MByte.

If you generate videos which are supposed to be played back from a CD-ROM, you limit the size and the transmission rate of the medium. That's why you will normally generate videos with a smaller resolution and a stronger compression rate. The one medium which will hamper you the most regarding video editing is the Internet. File sizes have to be kept to a minimum, so that transmission via the telephone line with its low transmission speed doesn't take forever. Developers are working very hard to come up with new technologies. The streaming-technology already makes it possible today to play back videos with a small resolution without prior complete data transfer directly via the Internet. A lot is going to happen in this sector in the future.

Good preparation enables the best possible video playback

It doesn't matter for which target group you produce a video, good and exact preparation of your video sources will not only always save you substantial time and work, but also ensure the best possible playback-quality. So before you start working with MoviePack, it is advisable to spend considerable time preparing of your clips, images and sounds.

By means of the following examples, you will learn about the application of sources in MoviePack and find out, which steps you need to carry out.

Inserting still images

Pepping up texts by applying background images

Still images fulfill a variety of functions in films. On the one hand, they can act as carrieres for certain information. Graphic display of statistics, maps or photos of people are typical examples. On the other hand, still images also serve as artistic aids. This way, you can pep up texts by adding a background to them. In compositing or when generating transitions, you apply individual graphics as masks or as the basis for interesting image distortions.

Constant tension between file size and playback-quality

Generally, you should always adapt your images to the intended purpose. Here, you have to take into account the file size, resolution and color depth, meaning the number of colors applied in the image. The reason for that is to achieve the ideal film quality for the intended purpose while keeping the file size as small as possible.

No-loss and high-loss file compression

The type of graphic file also plays an important role. MoviePack supports a large number of different image formats which can be generated by different types of computers. The file size is independant of the number of pixels and colors of an image. In order to speed up data transmission of a graphic file, compression methods are applied to reduce the file size. Here, you have to differ between no-loss and high-loss data compression. The latter one results in a significantly smaller file size, however, image quality is irrevocably lost.

High compression leads to low-quality display.

The output-format is decisive

In the end, the output-format of the film you generate is decisive regarding the type and quality of the still image. For television and movies, you need images of the highest possible quality. The image distortions, which occur with high-loss compression, are very visible and ugly.
Then again, for an Internet-clip you will use a compression rate during rendering, which will reduce the quality in order to obtain the smallest file size possible. Here, this is more important than the best possible image quality.

Print resolution is not screen resolution

You should always have a look at the resolution of still images before applying them in your project. Often, graphics were generated for printing. Therefore, they've got the wrong color format (CMYK instead of RGB) and the resolution is much too high. You can work with these graphics in MoviePack, but the only thing you increase significantly with that is the rendering time of your project.

Before you start working with MoviePack, adapt the graphic to the desired output-format with the aid of an image editing program. For TV-resolution (PAL) that means: image size = 768 x 576 pixel, resolution = 75 dpi (depending on the hole-pattern of your monitor; it is also possible to work with a resolution of 72 dpi). Everything in excess of that is unnecessary data load, unless you want to enlarge a section of the graphic in your film. In that case, a higher resolution is necessary.

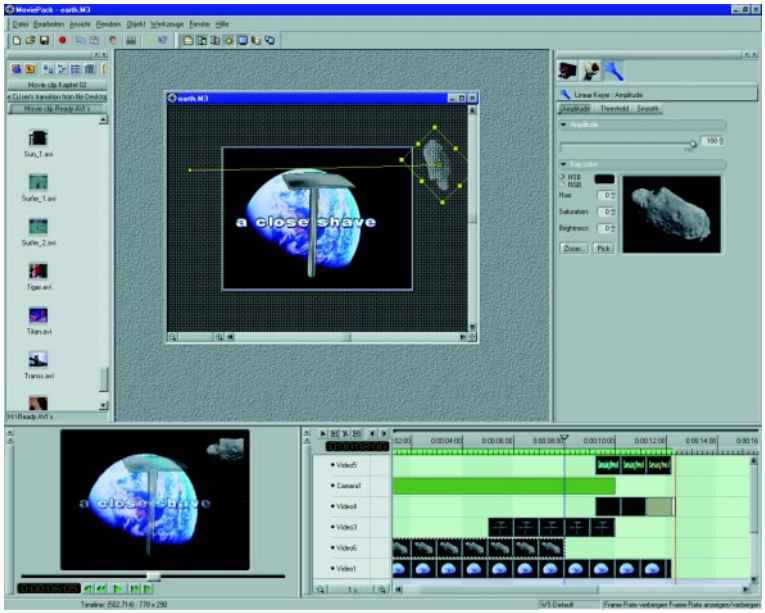
For the following example, the still images on the CD were already adapted in size so you can see immediately how the playback-quality and the resolution influence computing time. At the same time, you will see how MoviePack adds life to still images. For that, we have generated a sample file for you.

Still images appear like film strips

You will be astonished to note that the still images applied in the project appear like animated film clips. In our example, the main focus is on placing the still images in a film project. for that, you only need to carry out a few steps in order to achieve the final result. At the same time you will notice which tricks and effects are being applied. In later examples, you will carry out these steps yourself. So do have a look at the different effect-settings in order to see just how easily you can achieve impressive results.

Proceed as follows:

- ▶ Copy the project directory „Samples“ to your hard drive.
- ▶ Open the sample file „Samples/Images/Image.M3“



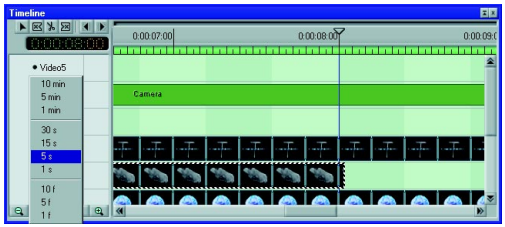
Layer-technique:
the overlapping levels create a feeling of depth.

Images, titlings and effects were already placed in this file. The theme of the project is a short, ficticious advert for a wet razor, the company is ficticious as well. The story - a meteor moves past the slowly revolving earth in space. He „clips" the earth. Out of nowhere, a wet razor appears in front of the earth with the text: „a close shave". In the end, the company logo appears with an advertising slogan.

Graphics and camera-functions

All in all, we're applying three graphics: earth, meteor, razor as well as two titles and a camera. Now you might wonder how the camera came into the project. This is one of the very special MoviePack-functions, for example, simulating the zoom of a camera lens. Your task is to insert the image of the meteor into the **Timeline**, adapt it and add motion to it. First, have a look at the stand of your project before you start this task.

▶ Click onto **Play** in the **Preview**.



Different time scalings enable an overview over the project.

Everything seems to be set up, except for the slogan: „a close shave“.

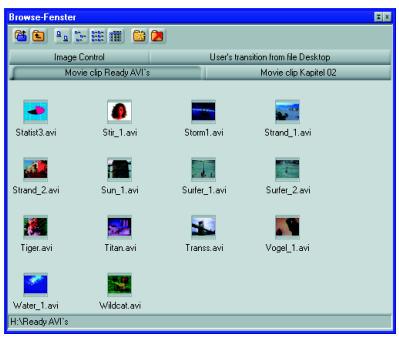
- Click onto the **Duration**-button in the **Timeline** and set the display units to 1 second.

Now you have a good overview over the entire film. The individual video tracks partially overlap. Before you proceed, arrange our project a little bit: rename the individual video tracks in the **Timeline**.

- Double-click onto the name „Video1“ in the **Timeline**.
- Mark the text by pulling the the depressed mouse-button to the right.
- Enter the word „Earth“.

Now the video track is called „Earth“. Proceed accordingly with the other tracks. You do not need to rename the camera track. By adding self-explanatory names, you will always keep the overview, even in longer films, in the **Timeline** and the **Timegraph**.

The **Browser**-Window makes it possible for you to establish a folder for often-used files, effects, and transitions. Make use of this option to significantly speed up your work.



Set up a folder for often used files, effects and transitions.

For fast access to image files:

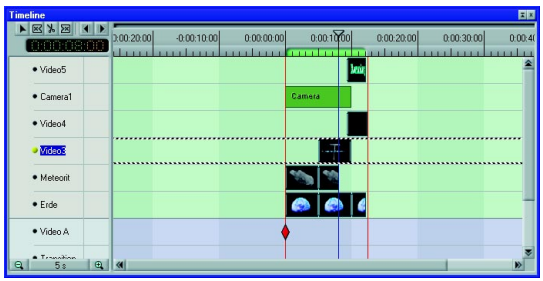
- Set up a new folder in the **Browser**-Window.
- Click onto the symbol **New folder** in the **Browser**-Window.
- A folder called **Root** opens up.
- Double-click onto **Objects**, **All objects**, **Images** and **Still Images**.
- In the **Browser**-Window, via **Workspace**, open the directory „Samples/Images" which contain the graphics of the film.
- Under **File** - **Save Workspace as** save your Workspace-settings.

This way, you always have your images at hand when working with a project.

Now we are going to position the meteor. In the **Browser**-Window, you can see a thumbnail view of the file, the stone in front of a black background.

- Activate video track „Earth" in the **Timeline** with a mouse-click.
- In the **Browser**-Window, click onto the graphic file „Meteor"

A new video track called „video 6" is inserted above the track called „Earth".



In case of a small display size, renamed video tracks sere for easier orientation.

- Re-name „video track 6" to „Meteor".

Chromakey-Effect for cutting out images

In the **Transition** and the **Preview**-Window, you can see that MoviePack has placed the image in the middle of the screen above the earth. The rectangular black background poses a problem when the meteor passes the earth. Therefore, we have to free the stone from its background. MoviePack helps you to do that with its **Chromakey**-effect. With this effect,

you can render a color or an entire color range transparent. The **Browser**-Window already contains its own folder for **Chromakey**-effects.

- Activate the video track „Meteor" with a mouse-click in the **Timeline**.
- Click onto the folder **Chromakey** in the **Browser**-Window.
- Double-click onto the effect **Linear Keyer**.

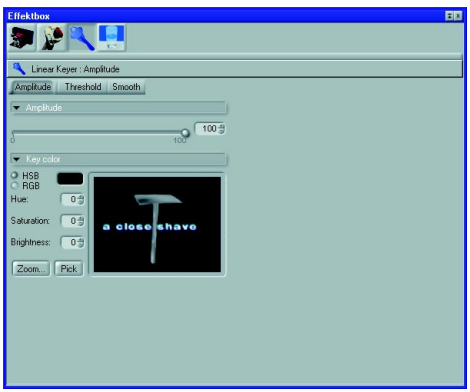
Now the symbol for the **Linear Keyer** appears in the **Effect-Box** together with its settings. In the default-setting, MoviePack separates all pure white pixels from the image. But we don't want that here. That's why you have to change the color value first.

- Move the CTI in the **Timeline** to 0:00:00:00.
- Click onto **Pick** in the **Effect-Box**.
- Move the mouse-cursor to the display window.

The cursor changes to an **Eye-dropper**.

- Click onto the black background.

The color display in the **Effect-Box** changes to black. The black section around the meteor disappears.



Chromakeying removes undesired color sections.

- Afterwards, adjust the playback-length of the image:
- Move the CTI in the **Timeline** to the right to 0:00:08:00.
- Play back the film in the **Preview** by pushing **Play**.

Key-color changes

You will notice that during the course of the film the black background slowly re-appears. That's the „fault" of MoviePack's keyframe-system. Each image alteration is automatically fixed in the program by at least one start and one end-keyframe. So when you apply the **Chromakey**-effect, MoviePack has placed the color white as the key-color at the beginning and at the end of the image clip. So far, you have only set the beginning to black, therefore the key-color changes from black to grey to white during the course of the film.

- In the **Timeline**, move the CTI to 0:00:08:00.
- Click onto **Pick** in the **Effect-Box**.
- Move the mouse-cursor to the **View**-Window.
- The cursor turns into an **Eye-dropper**.
- Click onto the black background.

Color display

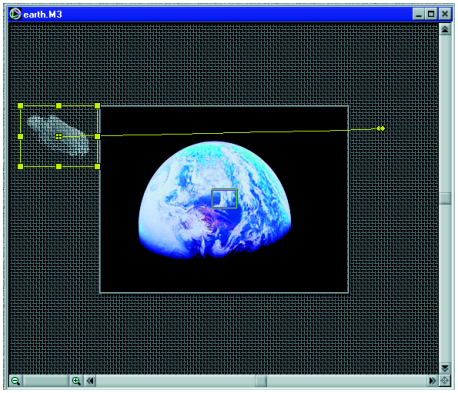
The color-display in the **Effect-Box** switches to black. Now, the meteor is free of its background for the entire duration.

Now you want to add some life to your stone and let it fly from the left to the right side of your screen while revolving around its own axis.

- In the **Timeline**, move the CTI to 0:00:00:00.
- On the **Canvas**, move the meteor out of the left upper corner of the screen.

Yellow line shows motion path

A yellow line appears, highlighting the motion path. The stone now flies from the top left into the middle.



Easy control of movement by interaction.

- Grab the end of the yellow line and pull it out of the top right corner of the image.
- In the **Timeline**, set the CTI to 0:00:08:00.
- Click onto one of the corners of the meteor image.
- While keeping the mouse-button depressed, revolve the image once around its own axis.
- Play back the film in the **Preview** by pressing **Play**.

The meteor trundles around through space and clips the earth. The advert for your wet razor is finished.

To finish it off, let's have a look at the effects in video track „Razor".

- In the **Timeline**, move the CTI to 0:00:05:00.

Soft fade-in

Actually, at this position the razor would have to cover the earth. However, this happens gradually. By simultaneously applying the **Transparency** as well as the **Chromakey**-effect, the razor and the text fade in softly, cut out of the background.

Embedding video sequences

Video for Windows and QuickTime

Video clips are the source type applied most often. But there are different formats here as well. On Windows-based systems, you will find mainly „Video for Windows"-files in application. These files all have the ending „.avi". On Apple computers, you will find the QuickTime Movie-format (file ending: „.mov").

The band-width break

All digital videos have in common that they have to be compressed in order to be played back on PC. When displaying video on PC, large amounts of data occur. The transmission of uncompressed video data demand of the system that it is capable of processing about 22 MB per second. Technical bottlenecks here made it difficult to overcome obstacles for the longest time. The ISA-bus-architecture with a band width of 16 Bit set a limit to the display on IBM-PCs, enforcing high compression rates and the thus resulting bad image quality. Today's bus systems allow for a data transmission rate of 132 MB/sec. So in theory, uncompressed video display would be possible.

Transmission times of hard drives still too slow.

However, the somewhat low transmission rate achieved by hard drives still pose a problem. There still aren't any hard drives available which can read or write this amount of data. That's why developers have designed special solutions for high-quality videos on computer. On the one hand, this took place by means of special hardware, on the other hand, with very efficient compression formats. Video boards control the data flow and enable a smooth video display in professioanl quality.

Error-free output is only achieved with special boards.

Error-free output without special boards is problematic, even with very well configured PCs. The reason for that is, that the current „Video for Windows"-format has an interim storage for recording in the meantime - but not for playback. This way, actions, like for example, moving the mouse, can disrupt the continuous flow of data, leading to a a shaking playback.

Another reason for the compression of digital videos are extremely large video files. Prices are decreasing drastically for fast, voluminous

harddrives, but handling uncompressed data bulks still poses a problem. One of the most widely known solutions to this problem is offerd by FAST with its video board „AV-Master". With it, you can generate digital video files in professional quality without having to spend a fortune on special components.
The video board market is currently fluctuating very strongly and a number of attractive solutions are available. MoviePack supports all common video boards on the market.

Codecs for a hardware-independant video display

In order to achieve a hardware-independant video display, a lot of software-compressors were developed. These so-called „Codecs" are especially important for the application of digital videos in multi-media productions or the Internet.
With different Codecs, you can prepare your video files for the most varied application fields, for example with codecs especially designed for the Internet.

Others, on the other hand, pay attention to the data rate to be achieved during playback, thus taking into account the different speeds of CD-ROM-drives.

Loss of quality due to compression

All these codecs have one thing in common: their application reduces the quality of the rendered video. That's why you have to consider them during input and output, in order to achieve the best result possible for the intended purpose.

3 Working with Transitions

Transitions change or highlight the message of a film.

With transitions, you also control the speed effect of the film.

Speed Effect

In this chapter you will find out what you have to pay attention to when applying transitions and how to use pre-made transitions. You will also find out how to custom-tailor these pre-made transitions to suit your requirements and how to create sophisticated transitions of your own.

Transitions as artistic aids

The contentual speed effect of a film is a decisive artistic aid in order to convey statements and information. This is especially apparent in commercial ads. Due to the shortness of the story, they force the producer to adhere to a very compact course. The name of the game is to not interrrupt the flow of action and to create associations for the viewer by linking scenes without him having to think about the content first. Transitions from one scene to the next have the most varied functions here.

Hard cut

For example, let's take different shots of a moving object. A yacht is filmed on board, from above and from a different ship. These three perspectives have one thing in common: the fluid movement of the passing water. The scenes are filmed in such a way that the direction of the flowing water is always the same. Now if you record the three scenes one after the other and join them directly (hard cut), the continuity of the film is preserved.

Hard cuts make up about 80% of the transitions in films. However, with each hard cut, the viewer's attention is drawn to the change of the scene. He is the interested in the changed environment and the film tells him three different stories from three different locations.

But if the scenes transition smoothly, the viewer's eye is drawn more to the fluid movement of the water. He mainly perceives the movement of the ship, the actual sailing, and not so much the ship itself. In a commercial film, the producer would use the first option in order to highlight the ship's equipment, for example. The example with the smooth transitions is designed to make the viewer wish he were aboard that ship. As you can see, transitions alter or highlight the contentual statement of a film.

Transitions

However, with transitions you also define the speed. A commercial film for a sportscar works with rapid, successive hard cuts. This way, a large number of details regarding the car can be displayed in a very short time. Due to the rapid succession of images, the viewer subconciously thinks: this car is fast! In the second to last scene, the car drives down a straight stretch of road at high speed and gets smaller and smaller, until it fades at the horizon. The film's speed is still very high. Finally, the company's logo is faded in „majestically" slow, until it covers the entire scene. This transition takes the speed out of the film and the viewer feels secure, exactly the effect that was intended.

The choice of the direction of movement is a critical aspect in the film. Think about it in detail: movement that is too varied or contradictive in successive scenes, quickly breaks down the fluidity of the film, forcing the viewer to re-orientate himself constantly. Concentration suffers as a result. Normally, the director will make sure to avoid that. If there's no way around it, transitions will make sure that the change of direction isn't as abrupt and the viewer is sufficiently prepared for this change of direction.

Timing

One of the most important things when applying transitions is the timing. As already mentioned, the influence of a transition regarding the appearance and the message of a film is of decisive importance. If you select the wrong speed for a transition, you distrub or destroy the fluidity of the scenes. As a guideline: slow passages should have slow transitions, faster ones fast transitions. There are no fixed rules, however, you will note that the length of the transitions applied in your project will rarely exceed two or three seconds.

As far as transitions go, MoviePack leaves nothing to be desired, no matter whether you want to apply one of our premade transitions or incorporate your own. For changing as well as creating transitions, the program switches to a special progam mode in order for you to retain the overview over your interface.

Transitions independent of projects

Transitions are often applied, repetitive tasks. Some of them you will surely want to incorporate in each project. That's why MoviePack allows you to create transitions independantly of the project and later on apply them time and time again. In due course, you will surely have created a collection of interesting transitions. MoviePack provides you with a large variety of transitions right from the start, which you can change and extend at wish.

Applying Pre-Made Transitions

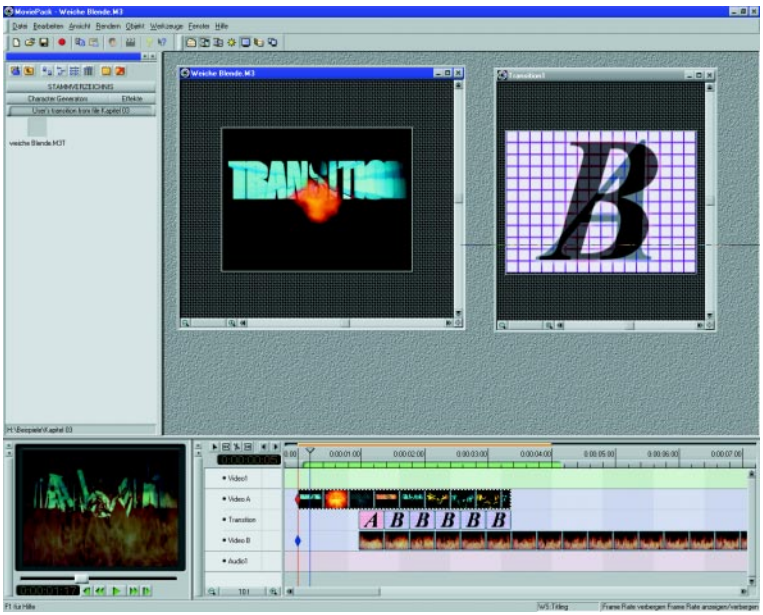
Soft blend

Besides the hard cut, the **Soft blend** is the most widely applied transition between two scenes. The end of the first clip is faded out in that time (getting weaker and weaker until finally disappearing) while the beginning of the second clip gets stronger and stronger. This merging of two clips is called **Soft blend**.

The lenght of the transition should adhere to the speed of the scene. The duration of fast blends is below one second. Blends with a duration of more than three seconds are mostly dramaturgical elements in order to highlight the peacefulness of a film (e.g. landscapes etc.). With fast films, they hinder the flow of images and should thus be avoided as a rule.

Applying a **Soft blend** in MoviePack:

- Open a new file.
- Activate video track A in the **Timeline** by clicking on it.

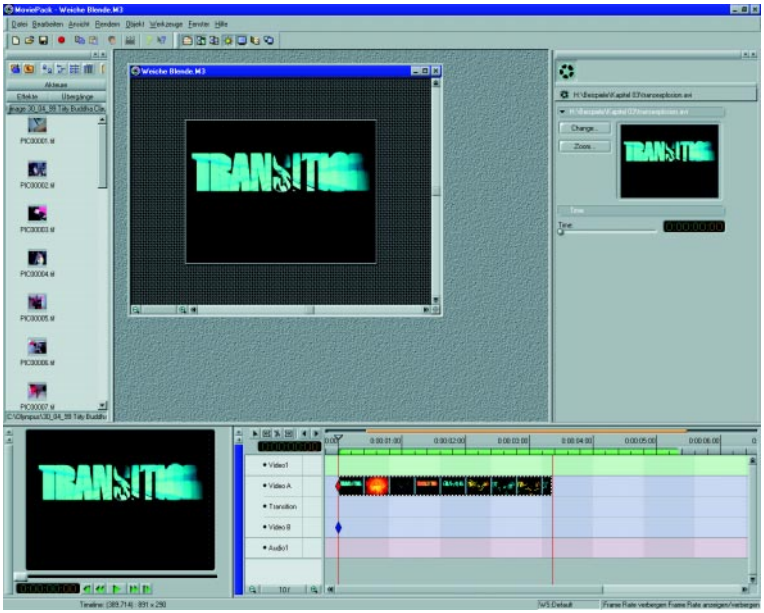


With a mouse-click you change the video tracks before you load a clip.

- Double-click in the **Browser**-Window on **All objects**
- Via the icons **Clips & Animations** and afterwards **Movie Clips**, change to the file manager for your Workspace.
- Select the file „Samples/Transitions/Explosion.avi“

The clip is automatically inserted in video track A.

- Activate video track B in the **Timeline** with a mouse-click.



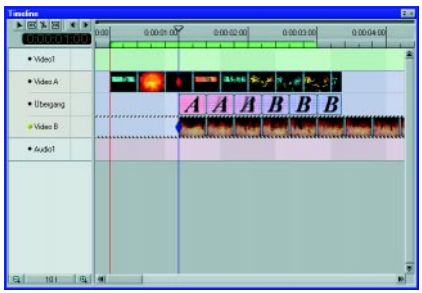
With a mouse-click you change the video tracks before you load a clip.

▶ Double-click onto „Fire.avi" in the **Browser**-Window.

The clip is automatically inserted in video track B.

Setting the range for the **Soft blend**:

▶ Open the **Monitor** by clicking onto the **Monitor**-icon in the icon bar.



Set the transition time via the CTI.

▶ Set the Current Time Indicator (CTI) of video track A to one second (0:00:01:00, red window).

- Move the red/blue arrow to the right in the right **Monitor** (blue window). The clip in video track B moves its starting time to 0:00:01:00.
- Set the CTI in the **Timeline** to 0:00:01:00.
- Double-click onto **Simple Transition** in the **Browser**-Window

The transition starts at 1 second.

- Pull the end of the transition to the end of video track A in the **Timeline**.
- Set the preview range with the green **Preview** bar in the **Timeline**.
- Click onto **Play** in the **Preview**.

In the **Preview**, you can see a soft blend from video track A to video track B.

How to create simple transitions

„A/B-Roll"-method

MoviePack applies transitions with the so-called „A/B-Roll"-method. This name originally derives from the world of analog film studios, where the cutter mostly just glued two film rolls together during cutting. Digital video editing allows the „glueing together" of an unlimited number of film strips, making sophisticated compositings possible. MoviePack has no limits regarding the number of necessary video tracks. However, transitions are only applicable to A/B-Rolls and that for a reason:

Transitions form an important joint when changing scenes. The course of the clip in A/B-Roll is the central theme of your film. Here, the basic course is defined, therefore transitions belong here.

In order to create the **Soft blend** mentioned above, proceed as follows:

- Open a new file.
- Activate video track A with a mouse-click in the **Timeline**.
- Double-click onto **Objects** in the **Browser**-Window.
- In the file manager for your Workspace, click onto the icons **Clips & Animations** and **Movie Clips**.
- Select the file „Samples/Transitions/Explosion.avi" via the **Browser**-Window.

The clip is automatically inserted in video track A.

- Activate video track B in the **Timeline** with a mouse-click.
- Double-click onto „Fire.avi" in the **Browser**-Window.

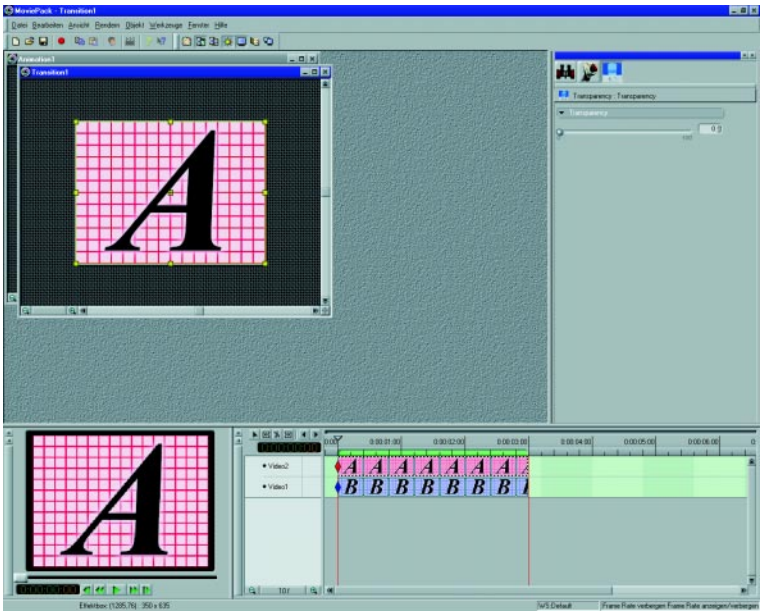
The clip is automatically inserted in video track B.

- Open a new transtion in the menu bar under **File / New**.

MoviePack has now switched to transition mode. There are two video tracks available now, A and B roll.

Joker for video clips

The letter A appears in the newly opened transition window. This letter acts as a joker for the video clip to which the finished transition is to be assigned. Now, video A completely overlaps video B.

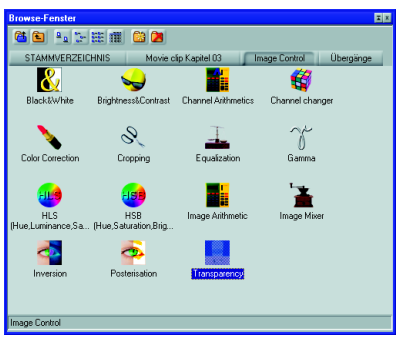


Letter A completely overlaps video B.

In order to achieve a **Soft blend**, change the transparency-behaviour of both video tracks. One track is supposed to completely dissolve during the transition, while the other is supposed to appear out of nowhere.

▶ Activate track A by clicking in the **Timeline**.

In the **Effect-Box**, a preview of track A appears with the name „A/B-Source".



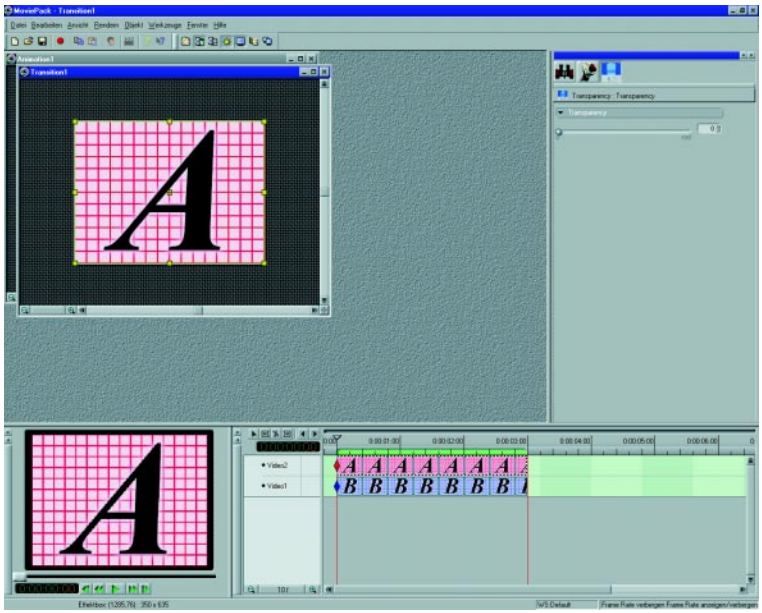
Track A changes its appearance to A/B Source in the **Effect-Box.**

▶ Click onto **Effects** in the **Browser**-Window.

- Select the effect **Transparency** via **Image Control** and activate it with a double-click.

An icon resembling a water-glas appears in the **Effect-Box,** representing the **Transparency**-effect.

- Move the CTI in the **Timeline** to 0:00:00:00.



Set the CTI to the beginning.

- In the **Effect-Box**, move the **Transparency**-slider to the left (set the value to 0)

Video track A is now completely opaque, meaning it covers video track B 100%.

- In the Time Bar of the **Timeline** click onto the end of the video track (0:00:03:00).
- Move the **Transparency**-slider in the **Effect-Box** to the right (value to 100).

You can check the result in the **Preview** by clicking the **Play**-button. Now you can see the Soft blend from video track A to video track B.

You should establish a special directory for your own transitions in order to find them fast and easily and to assure that you do not delete them by accident. In the menu bar, save your newly generated transition via **File / Save as**.

To return to animation-mode:

- Close the **Transition-mode** via the menu bar under **File / Close**.

Changing the mixture proportions of tracks

MoviePack features especially detailed mixing of tracks.

Should you wish to create a more detailed transition, try the following:

- Set the **Transparency** for video track A as described.

Transparency of video tracks

- Change the **Transparency** of video track B the same way, but with the following difference: set the **Transparency** at the beginning and the end by reversing the values, meaning first 100 and then 0. This way, you achieve a more defined mixing proportion of the tracks.

Adjusting existing transitions

Applying a pre-defined transition doesn't always yield the desired results. Pre-made just isn't custom-tailored. But MoviePack offers you fantastic options in order to adapt existing transitions to suit your requirements.

The previous example has shown that the behaviour of a transition can be adapted. With a **Soft blend**, for example, it could happen that the action in a scene cannot be seen anymore if you fade out the track too soon.

However, the beginning of a transition as well as its length have been adjusted properly and shouldn't be changed anymore. With an even change of the transparency over time, the result is not satisfactory. MoviePack supports the professional technique of inserting exact time-alterations into the course of an image change with keyframes in the **Timegraph**.

You will encounter this principle time and time again in your work, and realize that this keyframe-function offers you a very practical tool for fine-tuning your video.

Proceed as follows:

- Open a new file.
- Activate video track A in the **Timeline** with a click .
- Double-click onto **Objects** in the **Browser**-Window.
- Access the file manager of your Workspace via **Clips & Animations** and afterwards **File Manager**.
- Select the file „Samples/Transitions/Drive.avi" in your **Browser**-Window.

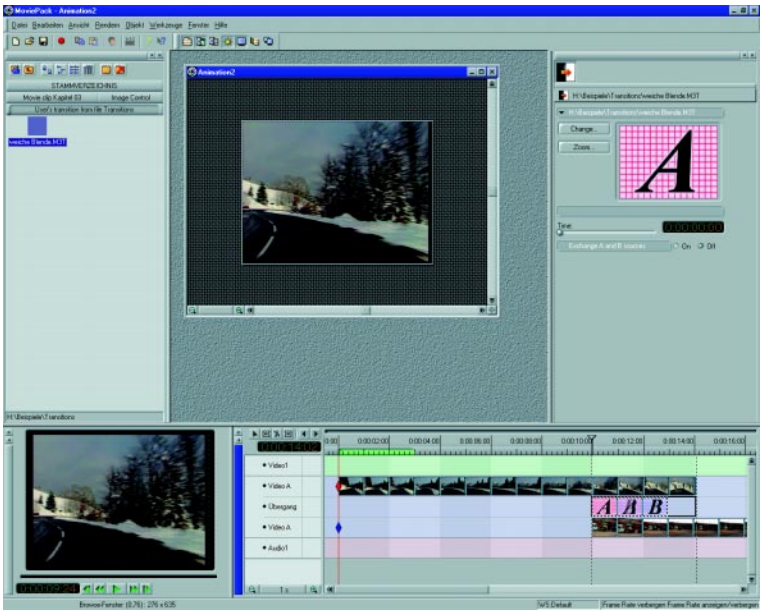
The clip is automatically inserted into video track A.

- Activate video track B in the **Timeline** with a click.
- Double-click onto „Oldtimer.avi" in the **Browser**-Window.

The clip is automatically inserted in video track B.

- Move the clip in video B in the **Timeline** so far to the right that both clips overlap each other for 4 seconds.
- Pull the CTI to the beginning of the clip in video B.

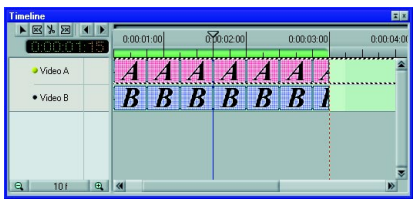
- Open the transition-directory „Samples/Transitions“.
- Double click onto „SoftTransition.M3T“.



The transition inserts itself exactly at the beginning of video B.

- Pull the cursor to the end of the transition and move it to the end of video A while keeping the mouse-button depressed.
- Set the Preview-range with the green **Preview Bar** in the **Timeline** and press **Play** in the **Preview**-Window.

The car in video A fades out too fast.



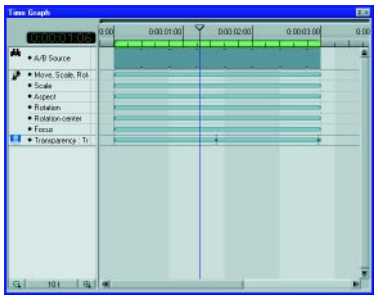
An additional keyframe avoids fading out too fast.

In order for the car to be visible longer, set a transition-keyframe:

- Double-click onto the transition in the **Timeline**

The program switches to **Transition-mode**.

- Move the CTI in the **Timeline** to the middle of the video track and activate video track A with a click.
- Click onto the **Transparency**-icon in the **Effect-Box** and set the transparency-slider to 30.
- Activate the **Timegraph**.
- Enlarge the **Timegraph** and move the scroll bar until the CTI becomes visible.
- Move the CTI in the **Timegraph** to the side.



In the **Timegraph** you can see a grey line representing the newly generated Keyframe for the **Transparency**.

- Switch to the Canvas by clicking onto it.

MoviePack has now switched back to animation-mode. You can check the result in the **Preview**.

If you like the result, switch back into **Transition-mode** by clicking onto the transition window. Save your transition under a new name.

Only when the car in video track A has left the scene, the transition sets in full strength.

Generating complex transitions

When you start working with MoviePack, you will surely find it difficult at the start not to incorporate all the features this software has to offer for digital editing and compositing into your projects. We don't want to keep you from doing so, even though you should stick with just a few options in your projects. By means of the following examples, you will see that there are no boundaries to image manipulation with MoviePack. Nothing's impossible - but sometimes it might look messy, if you try to incorporate too many things at once.

The message is the name of the game, not showiness

When planning a project, keep remembering what editing video clips is all about: merging image and sound sources with your own statement and characters to create a harmoneous entity. Image and sound sources always have priority. Remeber, your film isn't supposed to be a show of pretty or spectacular effects, but is supposed to convey a message. Therefore, be careful when applying transitions. The final result and your audience will thank you for it.

Nonetheless, we are going to show you all the manyfold possibilities MoviePack has to offer when creating transitions in this chapter. You can make your transitions come to life by adding movement, effects or a combination thereof. Furthermore, you can integrate your own images in a transition, either still or moving.

Should you already have experience with image editing programs like Adobe's Photoshop, you will surely be fascinated when you find out, what effect the image editing filters have on your transitions. Why not experiment yourself with the following examples? But don't forget: more is often less.

Adjusting the positon of transitions

First, we will adjust the position of a transition. By moving it to the side, you generate an effect that is close to changing the slides during a slide show. The big difference: by changing the transparency, movement becomes much more soft and fluid.

Proceed as follows:

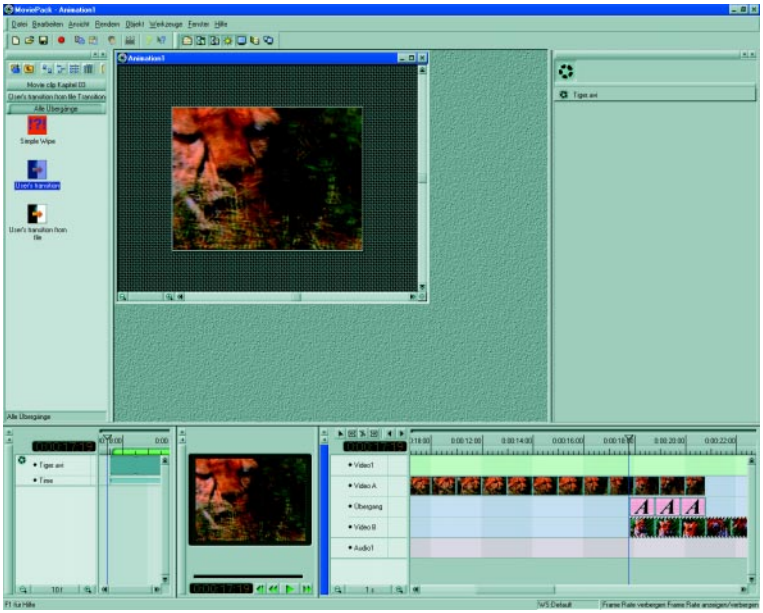
- Open a new file.
- Activate video track A in the **Timeline** with a mouse-click.
- In the **Browser**-Window, click onto **Objects**.
- Access the file manager of your Workspace via **Clips & Animations** and afterwards **Movie Clips**.
- Select the file „Samples/Transitions/Cheeta.avi" in the **Browser**-Window.

The clip is automatically inserted in video track A.

- Activate video track B in the **Timeline** with a mouse-click.
- Double-click onto „Tiger.avi" in the **Browser**-Window.

The clip is automatically inserted in video track B.

- Move the clip in video B in the **Timeline** so far to the right until both clips overlap for 3 seconds and move the CTI to the beginning of the clip in video B.



By moving the video clips, you define the duration of the transition.

- ▶ Double click onto **User´s transition** in the folder **All transitions**.

MoviePack places a new transition at the beginning of video B.

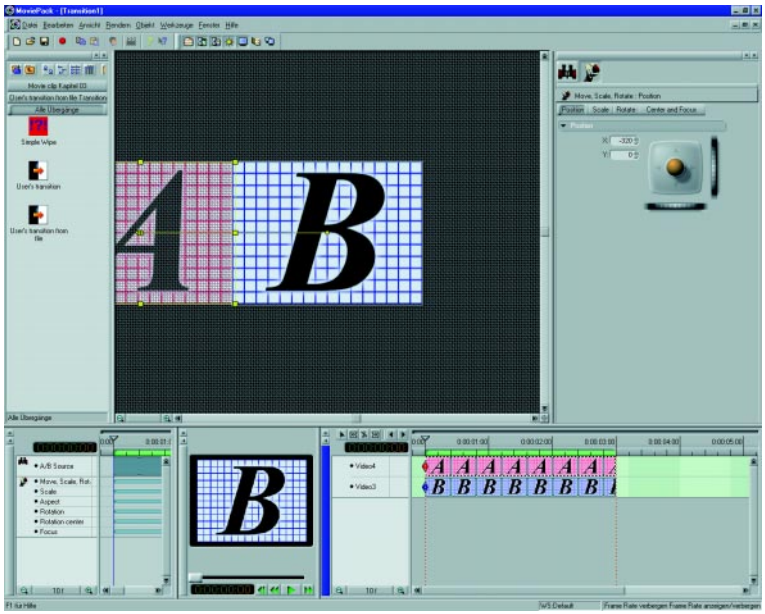
- ▶ Double click onto the new transition in the **Timeline**.
- ▶ MoviePack switches to **Transition-mode**.

Activate video A in the **Timeline** with a mouse-click.

- ▶ In the **Effect-Box**, click onto the **Position**-icon.
- ▶ Make sure that the CTI in the **Timeline** is set to position 0:00:00:00.

ⓘ You achieve the same result by entering the value -320 for the X-position in the **Effect-Box.**

- ▶ Move video A in the Transition-Window to the left until it disappears.
- ▶ Play back the **Preview**.



You can extend the Preview-range.

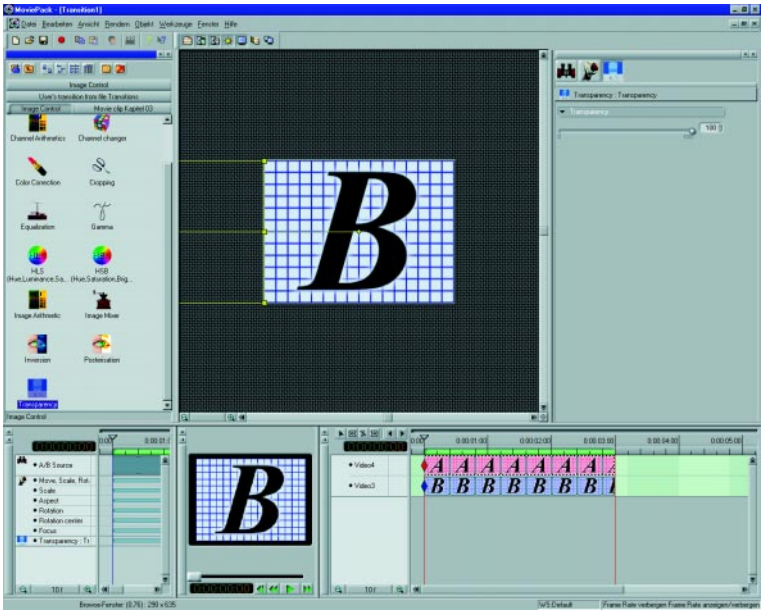
Adjusting the Preview range

If you're not able to see the **Preview** to the full extent, you have to adjust the Preview-range with the green **Preview Bar** in the **Timeline**. In the **Preview**, you should see how video A overlaps video B. This way you have set a so-called slide. A slide is a standard image change which you now have to fine-tune.

- Make sure the CTI in the **Timeline** is set to 0:00:00:00.
- In the **Browser**-Window, locate the effect **Transparency** (**Effects** / **Image Control**).

Video A is still activated.

- In the **Browser**-window, double-click onto **Transparency**.
- With the slider, set the transparency-value to 100.



Move the slider all the way to the right in the **Browser**-window.

- In the **Timeline**, set the CTI to the end of the video tracks (= 3 sec).
- Set the transparency to 0 with the slider. The transparency of video A changes within 3 seconds from transparent to opaque.
- Play back the **Preview**.

The slide-motion lets the two video sources blend gradually and this appears much more fluid and soft than a normal slide.

- Switch to transition mode by clicking on the Canvas.

Transition doesn't work correctly

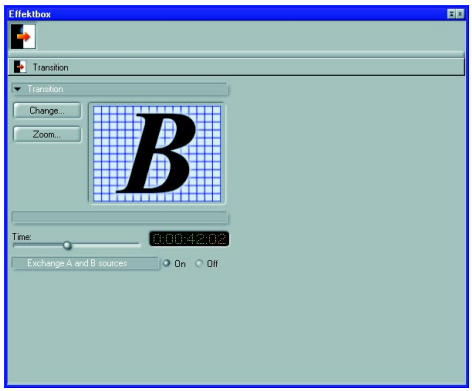
If you now look at the **Preview** of your animation, you will notice that the transition doesn't work correctly. The reason for that is the placement of the clips in A/B-Roll. Up to now, you didn't have to think about the position of the clips when generating transitions. However, the newly generated transition only works if you exchange the two tracks. This is a peculia-

rity of the A/B-Roll-method. Due to the fact that transitions can only be placed between video A and video B, the result is that transitions have to be effected once from top to bottom and afterwards from the botton to the top.

Switching tracks

It would be very involved to generate each transition twice. MoviePack takes care of this problem for you by making it possible to switch tracks in the **Effect-Box.**

- Click onto the transition in the **Timeline**.
- Push the button „Swap A/B-Roll" in the **Effect-Box.**



Once you have switched tracks via Swap A/B-Roll, MoviePack will apply the transition correctly.

Animated transitions

Position manipulations

Animated transitions are a very atrractive way to move from one scene to the next. In this example, a very simple motion was combined with a change in transparency. You will definetely apply this combination - motion and transparency - often to your transitions. If they are combined in the right way, they guarantee harmoneous transitions. In its **Effect-Box**, MoviePack offers you a large number of easy-to-apply position manipulations.

If you combine repositioning, scaling, rotating and rotation-axis changes, you can generate a transition that tumbles from the background into the foreground, for example. In the

sample file „Samples/Transitions/ARD.M3" we have prepared such a transition for you. Have a look at the changes in motion and you will see how easy it is to create a spatial motion.

Film in film

The following example shows you the application of a video sequence in a transition. Transitions of this type have their very own character: The principle here is film in film. Because of the video, the transition makes its own statement. This statement has to be conform with the video clips to which the transition is to be applied.

These kind of transitions should be applied continuously throughout the video project. In our easy example, an airplane overlaps a helicopter. Both have the same motion in common: the revolving rotor blades of the helicopter and the revolving propellers of the airplane.

3D-Animation durch Torus-Körper

Diese charakteristische Bewegung wurde in einer 3D-Animation durch Torus-Körper nachgestellt, die sich drehen. Die weichen, runden Körperformen, sowie der durch den eingesetzten Bildberechnungs-Effekt erzielte metallische Eindruck der Torus-Oberflächen harmoniert mit den Formen und dem Material der Flugmodelle. Das Ergebnis ist eine Blende mit einem technischen, futuristischen Charakter.

In einem größeren Filmprojekt — beispielsweise ein Bericht über eine Flugzeugausstellung — könnten nun 3D-Animationen anderer Körper die unterschiedlichen Formen der Fluggeräte in weiteren Übergänge verbinden. Die Folge wäre eine erhebliche Aufwertung der einzelnen Clips zu einem optisch schlüssigen Filmergebnis.

You generate a characteristic transition as follows:

- Open a new file.
- Activate video track A in the **Timeline** with a click.
- In the **Browser**-Window, click onto **Objects**.

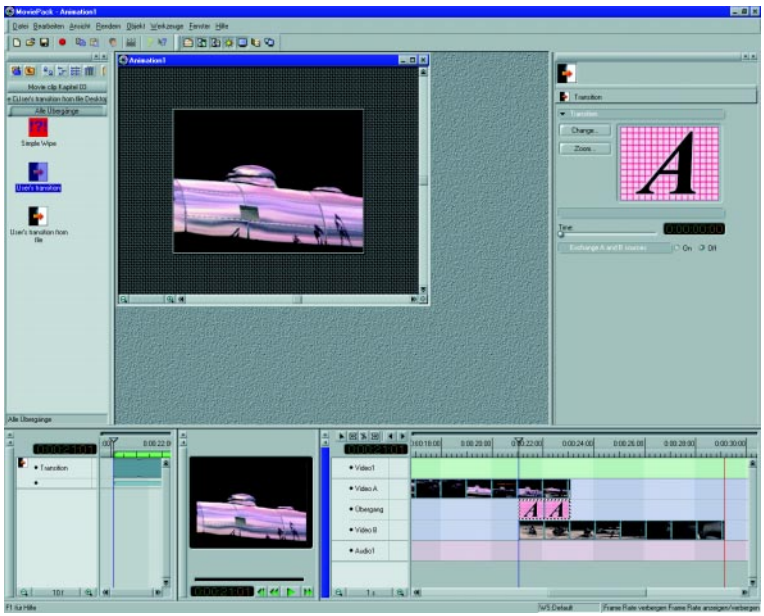
- Access the file manager of your Workspace via **Clips & Animations** and afterwards **Movie Clips**.
- Select „Samples/Transitions/Airplane.avi".

The clip is automatically inserted in video track A.

- Activate video track B in the **Timeline** with a click.
- Double-click onto „Helicopter.avi" in the **Browser**-Window.

The clip is automatically inserted in video track B.

- Move the clip in the **Timeline** so far to the right until both clips overlap for 3 seconds.



The **Preview** shows you the effect of the overlap.

- Set the CTI to the beginning of the clip in video B.
- Double-click onto **User´s transition** in the **Browser**-Window.

A new transition is placed at the beginning of video B.

- Double-click onto the new transition in the **Timeline**.

MoviePack switches to **Transition-mode**.

- Activate video A in the **Timeline**.
- In the **Browser**-Window, select **Effects** and **Image Control**.
- Double-click onto **Transparency**.

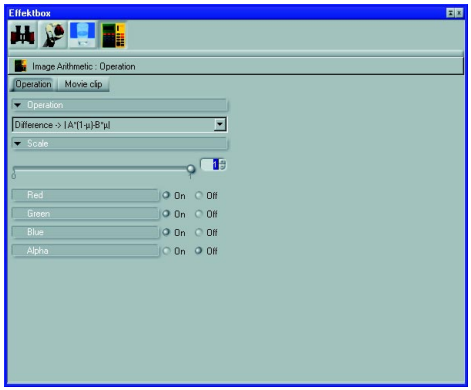
This way, video A overlaps video B for 3 seconds :

- Set the **Transparency**-value to 0 at 0:00:00:00 and to 100 at 0:00:03:00.
- In the **Browser**-Window, select the effect **Image Arithmetics** with a double-click.

MoviePack will ask you for the source type for rendering.

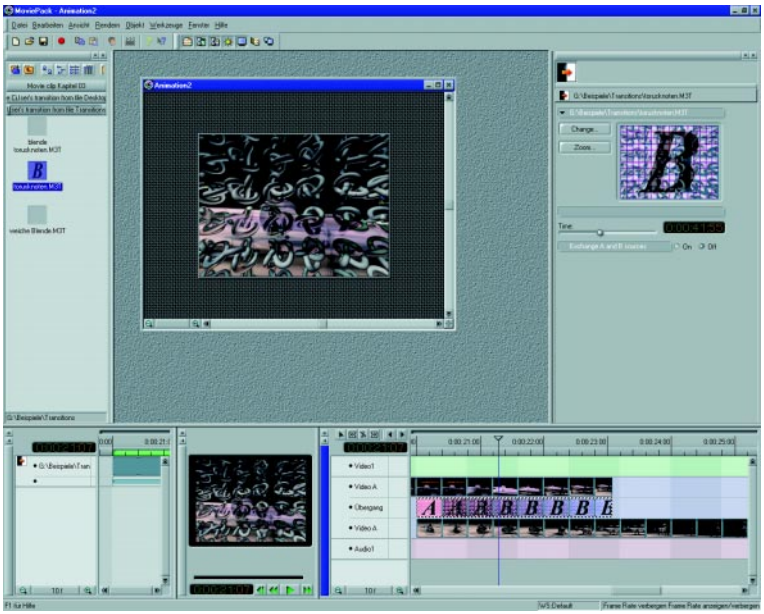
- Select the sample animation „Samples/3D-Animation/Nodes.avi".
- Activate the operation **Difference** in the **Effect-Box.**
- Set **Alpha** to **Off**.
- Set the scale-value to 0.
- Set the CTI to 0:00:02:00.
- Set the CTI to 0:00:03:00.
- In the **Effect-Box**, set the scale value to 0,5.

Now, MoviePack calculates the **Difference**-Effect for the transition of video A with increasing strength and combines this with the decreasing transparency of the track.



The merging clips of video A and the 3D-animation appear stronger and stronger.

- Save your transition in your transition folder.
- Switch to animation-mode.
- Set the preview period with the green **Preview** bar in the **Timeline**.
- Play back the transition.



Perfect overview:
in the **Preview** you can see the exact course of the animation.

Please note: if you change rendering-operations in the **Effect-Box**, you might achieve completely different results depending on your selection. Try it out!

4 Working with Effects

With its effects, MoviePack offers you a very powerful tool. Applied individually, they already offer astonishing results. This way, you can turn a 2-dimensional flag into a very realistic 3D-flag fluttering in the wind, for example.

Bubbles appear out of nowhere on a plastic surface, a video source disappears down a swirling drain. In a virtual studio, you can let people talk to cartoon characters and make two people have a conversation that have never even met before.

But wait until you start combining effects! Then you'll see the almost unlimited possibilities MoviePack has to offer for the compositing of image sources. Place your videos, texts or images in your film - as often and as many as you like. The only thing that could limit you here is the computing power of your system.

Application fields for effects

Get inspiration from advertisements

While editing is more a necessary task, compositing is pure creativity. Here, you need your imagination and style. Why not get inspiration from the professionals: re-design your television evening at home. Look at advertisements carefully, record them and have a close look at the work of the pros by watching a clip over and over again, which normally passes you by at high speed.

You will be surprised to see how simple good advertisements actually are, but also, at the results professional effects have. As far as unusual effects go, music videos will inspire you greatly.

Effects influence each other

When you worked through the chapter „Transitions", you already applied your first MoviePack-Effects. It is important to understand the sequence in which effects are applied. As a rule, you can apply as many effects simultaneously as you like, but because MoviePack processes these effects one after the other, they influence each other.
What could happen then is that the effects cancel out each

other. If, for example, you apply a transparency-effect at the beginning, the optical intensity of all further image calculations depends on that transparency-value.
A color effect, on the other hand could render other color-based effects completely useless. As you can see, you really need to know the exact function of an effect in order to apply it as best as possible.

Effect groups

MoviePack divides its effects into effect groups which you can find in the **Browser**-Window under **Effects**. **2D-FX** and **3D-FX** are sophisticated procedures which will distort your images two or three-dimensionally.

Basic forms

In the section **Chromakeying** you will find the right tools for the construction of your virtual studio. **Image Control** contains extensive image editing functions (as we've already discussed in the chapter „Transitions"). If your video is supposed to take on the shape of a ball, for example, the section **Basic 3D forms** provides you with the necessary basic form to do so.

Materials

Rembrandt would have gone green with envy if he would have known about MoviePack's functions. The over 50 paint-effects in **Convolutions** turn your video into an animated painting. With **Materials** you can assign the most varied materials to backgrounds and videos - a highly professional option! **Styles** and **Wipes** offer various time-saving preset effects.

Application range of effects

The application range is most varied and can't always be tied to the effect groups. Generally, we distinguish the sections „Editing", „Compositing", „Titling" and „Synchronization". Depending on the section, each effect can yield the most varied results.

Sometimes a color filter in a transition behaves differently as if it were applied to a clip. If you combine it with an artistic Convolution-Effect, it makes the edited clip look like an old, faded oil-painting. Therefore, it is simply impossible to categorize the large number of effects in MoviePack. Thanks to the most varied combination methods, you can still yield new results after years of working with MoviePack. The program grows with your experience.

Combinations: Different effect results

The most attractive application field for effects is no doubt the compositing. Here, the effects behave like the basic colors which through mixing always yield new, interesting color combinations.

Compositing: Mixing effects like basic colors

Colored Border

Colored Border applied to blur a clip.

At first glance, **Colored Border** doesn't appear to be very spectacular, but is nonetheless vital for specific projects.

Surrounding a clip with a colored border is great, for example, if you want to place the clip like a small window inside another one. This monitor window then nicely sets itself off from the background by its small, colored border. You might have seen this effect during Formula 1 races on your sports channel, where you are able to see different camera angles simultaneously.

Placing a colored border around a clip

Dividing the screen into several clips

Another nice possibility is the division of the screen into several clips. Four different car types are introduced by a speaker. During each description, the car in question is highlighted with a colored border.

As we've said - nothing spectcular, really. However, by placing keyframes, MoviePack's **Colored Border** effect allows you to blur your clip while applying the effect as a transition at the same time.

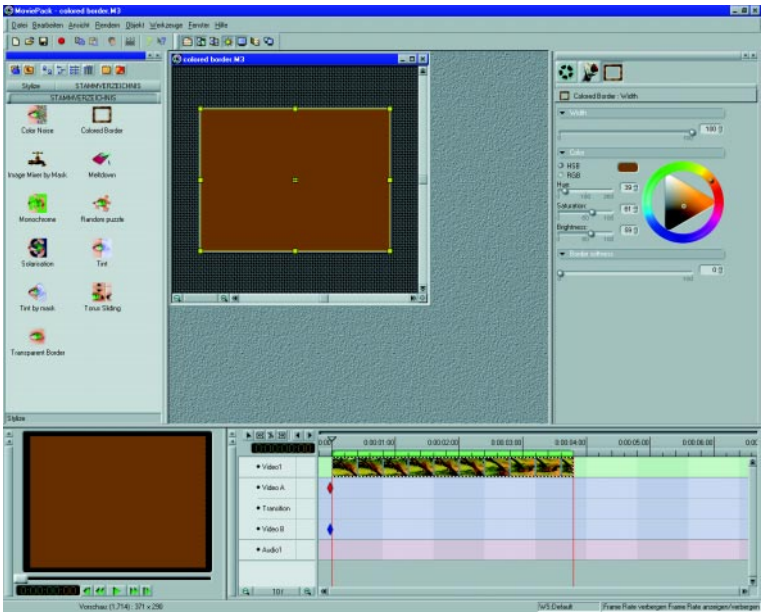
Creating a romantic atmosphere

In our example, we'll be working with the clip „Samples/Effects/Lions.avi". Without the effect, the clip appears very simple and functional. But by applying **Colored Border**, you create an almost dreamy atmosphere which highlights the playfulness of the scene.

Applying the effect:

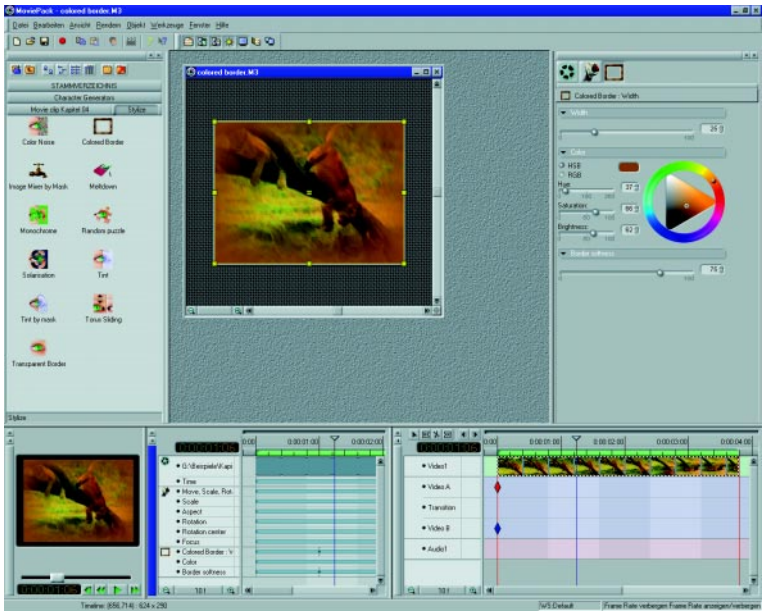
- Open a new file.
- In the **Browser**-Window, open the clip „Samples/Effects/Lions.avi" with a double-click.
- Switch to the effects in the **Browser**-Window.
- Select the effect group **Styles**.
- Set the CTI in the **Timeline** to 0:00:00:00.
- Double-click onto **Colored Border** in the **Browser**-Window.

Now you are at the beginning of the clip.



The highest value for the border width completely colors in the image.

- In the **Effect**-Box, enter the value 100 for **Width** and 0 for **Border Softness**.
- Set the **Color** values (**Hue, Saturation, Brightness**) to 35/75/70.
- Move the CTI in the **Timeline** to 1 second.
- Set the value for **Width** to 25 and **Border Softness** to 75.
- Set the **Color** values to 35/75/70.
- Move the CTI to the end of the clip and repeat the value adjustments for **Color**, **Width** and **Border Softness** as before.
- Have a look at the results in the **Preview**-Window or let MoviePack create a new clip file through rendering.



With the color adjuster, you can fine-tune the border color to fit your clip.

To finish off the clip:

- Set the CTI to 0:00:03:00 and enter the same values as for 0:00:01:00 (**Width** to 25 and **Border Softness** to 75).
- Move the CTI to the end of the clip.
- Enter the same values as in the beginning (**Color** to 35/75/70, **Border Softness** to 0, **Width** to 100).

The clip closes with a light brown color hue which covers the entire image.

3D-FX

3D-animations

With its numerous three-dimensional effects, MoviePack offers you unusual image distortion features. In this group, you will find functions which up to now were only available in very expensive 3D-animation programs.

Rendering speed

Here the special feature isn't only the resulting image quality but also the rendering speed. You can have a look at the preliminary result in the **Preview** and carry out further adjustments interactively while the result is played back. The working time thus saved is considerable.

3D-FX are typical compositing effects. The spatial effect can considerably upgrade a simple image source. In this example, you will create a sophisticated animted video sequence from two still images. The one image is a shot of the Triumphal Arch on the Place de l'Etoile in Paris and the other one a simple shot of the Tricolore. You will be working with three video tracks. The background of the Tricolore remains unchanged. The Triumphal Arch on the second track will be assigned the **Wet border**-effect. With this effect, you create the illusion of an animated video. You will be surprised at how life-like your still image will become.

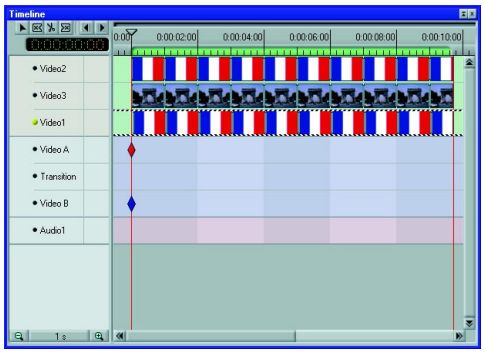
Fluttering flag

On the third track, we will also place the image of the Tricolore. The effect **Flag** in conjunction with the scaling function will turn the simple image file into a three-dimensional flag fluttering in the wind. The backgound needs to be defined additionally, because the **Wet border**-effect will distort the image in such a way that gaps appear at the sides which would normally shine through in black. This way, the national colors shining through will highlight the „Frenchness" of the clip.

Proceed as follows:

- Open a new file.
- In the **Browser**-Window, open the images „Samples/Effects/Arc.jpg" + „France.jpg" + „Alley.jpg" one after the other with a double-click.

MoviePack will place each image in its own video track.

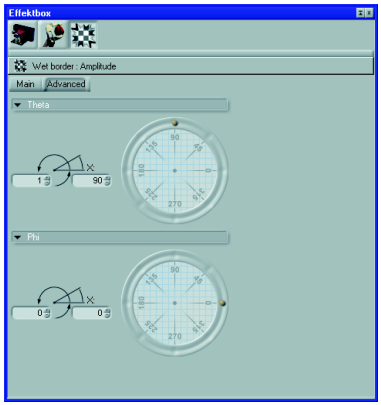


By double-clicking in the **Browser**-Window, MoviePack automatically places the images.

- For the next step, move the mouse-cursor to the end of each image clip and pull it to the right while keeping the mouse-button depressed.
- Set the playback-time of the images in the **Timeline** to 10 seconds.
- Activate video track 2.
- Open the effect group **3D-FX** in the **Browser**-Window and double-click onto **Wet border**.

The effect is assigned to the activated video track 2.

- In the Effect-Box, click onto the effect **Wet border**.
- Make sure that the CTI in the **Timeline** is set to 0:00:00:00.
- For the **Amplitude**, enter the value 50, for **Radius** the value 0.3 and for **Nodes** the value 20.
- Move the CTI to 0:00:04:00.
- Set the **Rotation** values to 1 and 90 and under **Advanced** the **Rotation** values for **Theta** to 1 and 90.



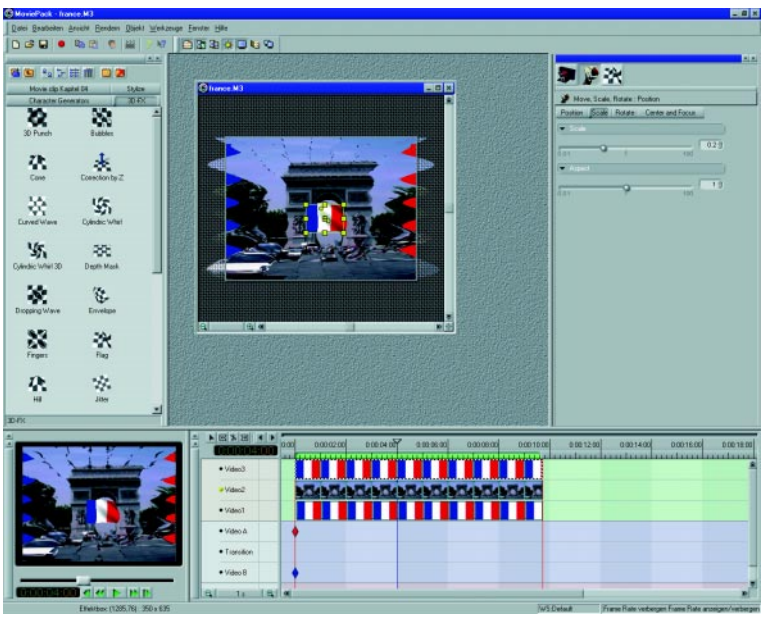
Wet Border: these values create an interesting motion effect.

Invisible wave motion

Now you have created a rotating, star-shaped wave motion. The result is still invisible, because video track 3 overlaps it.

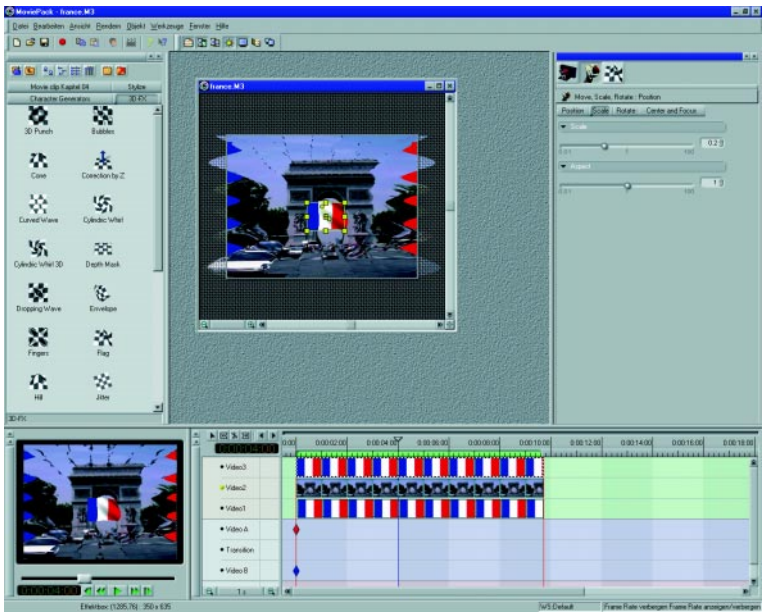
Now you want to make the Tricolore flutter in the wind. At the same time, you create the illusion that the flag is flying through the Triumphal Arch by scaling the image source.

- Set the CTI in the **Timeline** to 0:00:00:00 and activate video track 3..



With flying colors:
Simple scaling lets the Tricolore fly through the Triumphal Arch.

- Double-click onto the effect **Flag** in the **Effect**-Box.
- Set the CTI in the **Timeline** to 0:00:04:00.
- In the **Effect**-Box, click onto the **Move**-icon and afterwards on **Scale**.
- Move the CTI to 0.2.



You can scale on the **Canvas** or in the Effect-Box.

Now the flag is reduced in size and flutters in front of the Triumphal Arch.

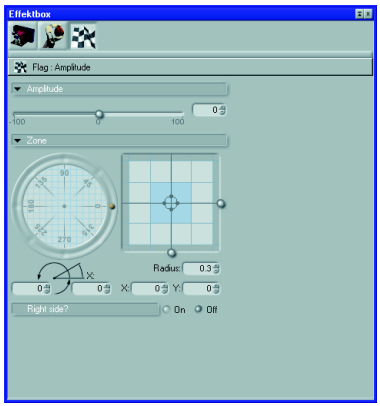
- Set the CTI to 0:00:08:00 and change the **Scale** value to 0.2.
- At 0:00:10:00, set the **Scale** value to 0.01.

The flag has disappeard.

Wind motion

Now we need to define the wind motion.

- At the beginning of the clip, set the **Amplitude** for **Flag** to 0 and the **Radius** to 0.3.



With these settings, you create a tranquil, slow movement of the flag.

- Set the CTI to 0:00:04:00 and the **Amplitude** to 50.
- Have a look at the result in the **Preview** or render the clip to create a new file.

Basic 3D forms

Adding volume shapes to clips

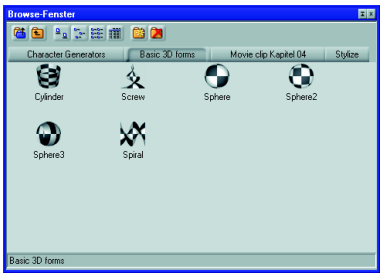
The effect-group **Basic 3D forms** provides you with volume shapes which you can add to your clips. This way, you can generate simple but effective compositings.

Recycling video sources

One of the special tricks here is using the same video source over and over again. This way, you can create interesting backgrounds upon which you can further build your compositings.

The example shows how perls of water move across the video, distorting the background in a nice way.

- In the **Browser**-Window, open the clip „Samples/Effects/Rooster.avi" with a double-click.
- Switch to the effects in the **Browser**-Window.
- Select the effect-group **Basic 3D forms**



Basic 3D forms distort image sources three-dimansionally.

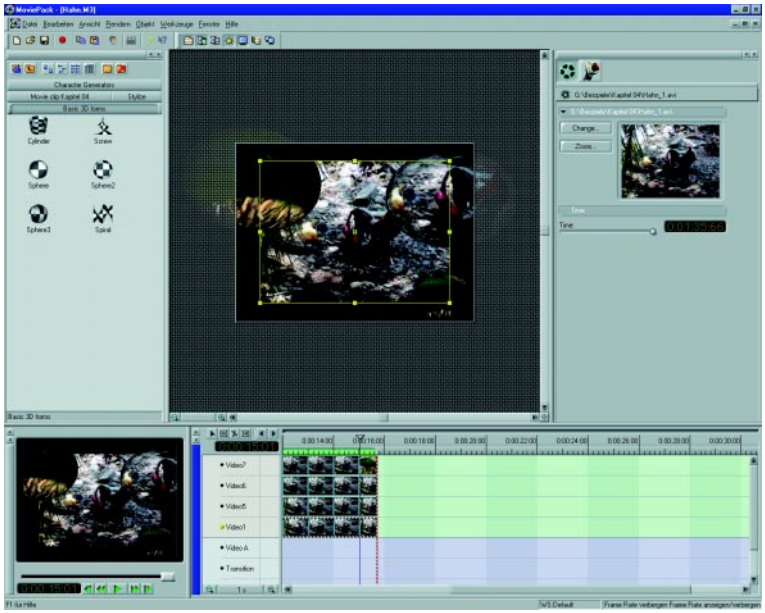
- Set the CTI to 0:00:00:00.

Now you will achieve the following effect: a sphere moves like a drop of water from the upper left corner to the bottom right corner. By repeated copying and re-pasting the video track and changing the motion paths, the image background is reflected in all spheres and this way creates a very pretty, three-dimesional distortion.

- Activate video track 1 with a click in the **Timeline**.
- Copy the clip to the clipboard and paste it via the menu point **Edit**.
- Activate the newly created video track 2.
- In the **Browser**-window, click onto **Sphere**.
- Click onto the **Effects**-icon in the **Effect**-Box.
- Set the **Amplitude** to 100.
- On the **Canvas**, move the sphere to the top left corner, **Position 160:120** .
- Move the CTI to the end of the clip and change the **Amplitude** to 100.
- Move the spehere to the bottom right corner of the **Canvas**.
- Look at the motion of the sphere in the **Preview**-Window.
- Activate video track 2 with a click in the **Timeline** and copy it to the clipboard.

With copying, all track alterations are taken over. Now you can paste as many copies as you like, but make sure you always have the CTI set to 0:00:00:00.

Track alterations are taken over automatically



Copyshop MoviePack:
by copying sources, you save valuable time.

Editing copies

You can now process the copies as you like on the **Canvas** in order to define more starting and finishing positions for the new spheres. By scaling, you can give the spheres different sizes. Go on and experiment! In „Samples/Effects/Spheres.M3" you can have a look at an example. But first go ahead and try out your own version. We're sure you will have lots of fun doing so!

Chromakeying

The virtual studio is the most talked about thing among professionals. A person is recorded in a very carefully lighted out room (normally blue, sometimes green). The camera is connected to a high-power PC. The recorded signal is linked with another scene on that computer via software.

In front of the sceen, the viewer gets the impression that the person is located right in the middle of that other scene. You could also place a cartoon-character here, for example or a real person. You probably saw the movie „Forrest Gump", in which people who have never even met talk to one another.

Filtering out the background and replacing it

The technique behind this trick: due to the uniform color of the recording studio, the PC is capable of filtering out the background. This way, the remaining signal can be linked with another image source. Sounds pretty simple. But in reality, the implementation of this effect is only possible after careful planning and the application of expensive hard and software.

The „Chroma Man" was computed in front of a blue background.

Because first, a few obstacles have to be taken. You might ask yourself, for example, „Why is the studio blue of all colors?". Blue is the least appearing color on the human body. Skin and hair color contains a lot of red particles. That's the reason for the blue backgound. Otherwise, holes might appear in the face of the recorded person.

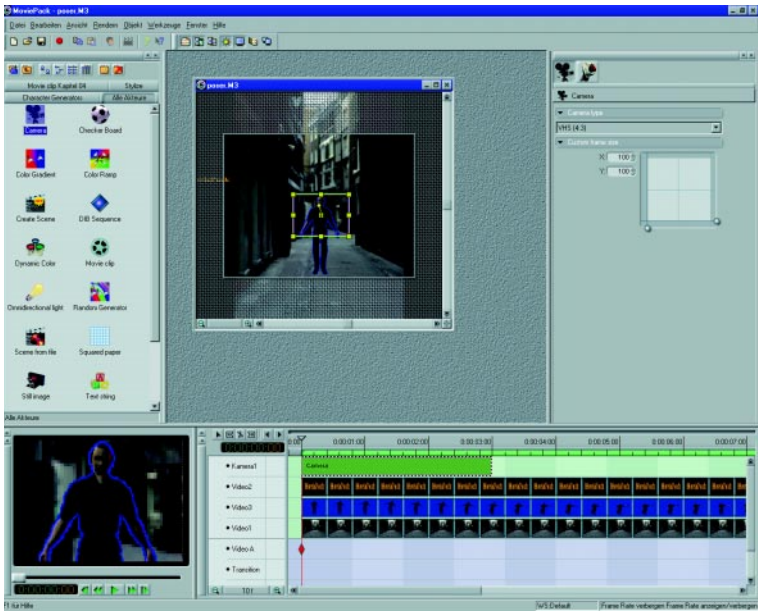
If an actor wears blue clothes, he „looses" his body. That's how „Thing" came to life in the „Addams Family" films.

Body disappears

One of the typical chromakeing problems are the irregularities when transitioning to blue. The colors of clothing and materials often contain blue particles. That makes for irregular transitions, so a person often appears to have blue flickers on him.

Switching off flickering transitions

Flickering also occurs when the video signal is too weak or the selected resolution too low. MoviePack features various adjustment possibilities to suppress this flickering.



MoviePack effortlessly removes irregular blue borders.

In this example, we're going to let an artificial character interact with a virtual object in a London alley. We have created the characters with MetaCreations Poser, a 3D-program for character animation.

Artificial character in London

Motion path of the object

For that, you have to imagine the motion path of the object - a 3D-text - and adjust the movement of the characters accordingly. The character was rendered in front of a blue background. We have adjusted the camera perspective to match the little alley in the back.

Now we're going to send our virtual friend to London, where he's going to be surprised by MoviePack:

- Open a new file
- In the **Browser**-Window, open the file „Samples/Effects/Alley.jpg" and the clip „Poser.avi" with a double-click.
- MoviePack now places each image in its own video track.

In order to adjust the playback-time of the image in the **Timeline** to 10 seconds:

- Take the cursor to the end of the clip and pull it to the right while keeping the mouse-button depressed.
- Adjust the image size in the **Canvas** with the handles.

You have to carry out these adjustments at the beginning and at the end of the film so that the size of the image remains the same during the entire duration. You can also adjust the size with the scaling-function in the **Effect**-Box. For that, move the CTI to 0:00:00:00 and in the **Effect**-Box, enter the value 0.5 for **Scale**.

- Set the CTI to 0:00:10:00 and again enter 0.5 for **Scale**.

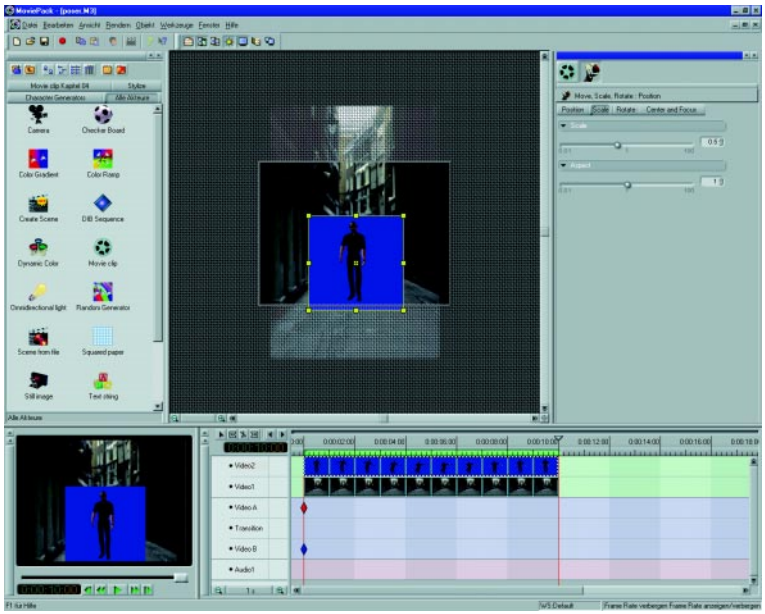
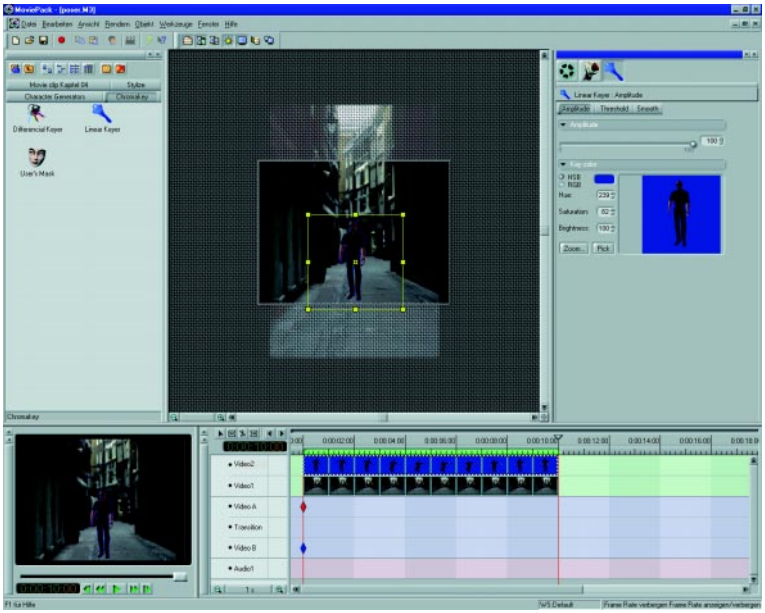


Image contents with different sizes can easily be adjusted by scaling.

- Activate video track 2
- Set the CTI to 0:00:00:00.
- In the **Browser**-Window, open the effect group **Chromakeying** and double-click oto the effect **Linear Keyer**.
- In the **Effect**-Box, click onto the **Effect**-icon.
- Set the **Amplitude** to 100.
- Click onto **Pick**.



The chromakey-effect lets both video tracks merge with each other.

The mouse-cursor changes to an eye-dropper.

- With the eye-dropper, select the blue color in the **Effect**-Box with a mouse-click.

Sloppy borders due to insufficient image data

- The blue background disappears and the image of the alley shines through. sloppy borders occur in clips with a low resolution (in this case 320 x 240 pixels), because of insufficient image data. Therefore, our friend is surrounded by a blue aura, which we'll have to get rid of.
- Push **Threshhold**.
- Set the value for **Threshhold** to 10 and the value for **Blue** to 128.
- Press **Smooth** and set the value to 15.

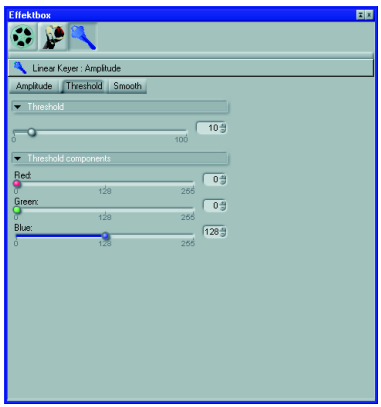
The sloppy borders have disappeared.

- Enter the same values for position 0:00:10:00.

- Set the CTI to 0:00:00:00.
- In the **Effect**-Box, click onto the **Effect**-icon.
- Set the **Amplitude** to 100.
- Click onto **Pick**.

The mouse-cursor turns into an eye-dropper.

- With the eye-dropper, select the blue color in the **Effect**-Box with a mouse-click.
- Click onto **Threshhold**.
- Set the value for **Threshhold** to 10 and the value for **Blue** to 128.

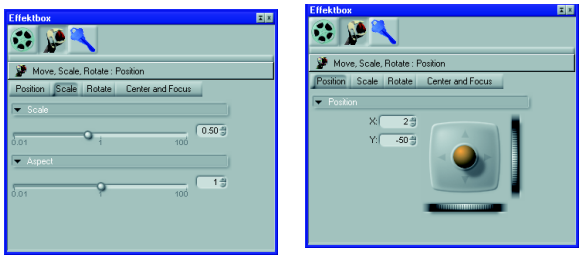


Remove the blue borders via **Threshhold**".

Adjusting the size

In the **Preview**-Window, you can now see how the man flinches away from something invisible in the alley. However, his size isn't right yet, he's too large for the scene. Here's how to adjust his size:

- Set the CTI to 0:00:00:00.
- In the **Effect**-Box, enter the following values for the **Position**: X=2 and Y=-50.
- Set the value for **Scale** to 0.5.



With simple position adjustments, adapt the character to its environment.

- Set the CTI to 0:00:10:00.
- Again, enter the following values for the **Position**: X=2 and Y=-50, for **Scale**, enter the value 0.5.

Now you have reduced the figure in size and moved it down a bit.

When you look at the scene in the **Preview**, it looks as if our friend is really in London. But the one thing that's still missing is the flying object. Here's how to add it to the scene:

- Set the CTI to 0:00:00:00.
- Activate video track 2.
- In the **Browser**-Window, double-click onto **Objects** and then again onto **Character Generators**.
- Now select the **Titler**.

MoviePack generates a new video track above video track 2 and activates the Title-Generator.

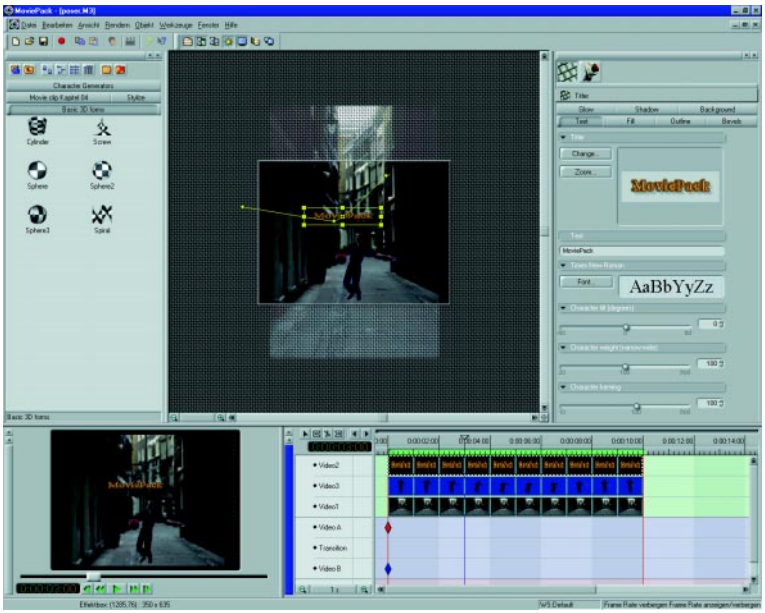
- In the **Effect**-Box, click onto the **Titler**-icon.
- Enter „MoviePack" in the text field.

Scaling 3D-texts

A 3D-text appears which is still too big.

- Grab one of the corner-handles and adjust the size to 25% in the **Canvas**.
- Move the text out of the **Canvas** to the left above the head of the character.

- Set the CTI to 0:00:03:00.



The yellow line depicts the flight path of the text.

- Again, grab one of the corner-handles and reduce the image to 25% of its original size.
- Move the text above the head of the character.
- Set the CTI to 0:00:10:00.
- Set the value for **Scale** in the **Effect**-Box to 0.5.
- Move the text to the upper right corner.
- Look at the result in the **Preview**.
- Let MoviePack generate a new clip file by rendering.

Now you will see that the character actually appears to be in London.

Adjusting the playback-speed

The only thing that's still wrong is the playback-speed. For demonstration purposes, we have rendered our friend in slow motion. Check the duration of the movement by carrying out this movement yourself. You will see that it doesn't take more than 2 to 3 seconds to duck and come back up again. MoviePack is especially helpful here, because it can re-render clips for a shorter duration without loss of quality:

- In the **Timeline**, shorten the video tracks to 3 seconds each while keeping the mouse-button depressed.
- Let MoviePack render the clip again.

Afterwards, motion and speed appear much more life-like.

5 Title-generators

MoviePack features two title-generators:

„Text string" for simple titles

With **Text String**, you can generate two-dimensional one-line texts which can be varied in color, size, font and font size. The background color can also be switched off, so that titles can float freely across underlying video tracks.

The text is generated in a track of its own, resulting in numerous interesting possibilities. All of MoviePack's effects can be applied here. That's where MoviePack's **Title Generators** are different from others. With MoviePack, words can be shaped into three-dimensional spirals or flags that flutter in the wind, for example.

Create 3D-animations with the „Titler"

The **Titler** is a powerful instrument offering you countless possibilities for three-dimensional texts. Warp your letters, add shadows to them, or let them glow! All of MoviePack's effects can be applied here as well.

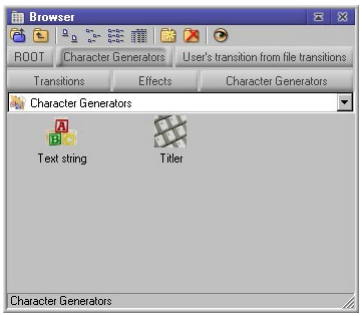
With the effect **Image Arithmetic**, you add a texture to the letters. If you're familiar with Adobe's Photoshop, you will surely know about the almost endless combination possibilities regarding rendering. The source can be anything, for example any type of graphic, video clip or animation.

In the following two exercises, you will learn how to work with the Title Generators. During the course of the excercise, you will generate a small 3D-animation with MoviePack. You will notice that the Title Generators can do much more than just blend in a simple text.

Text glows in 3D

With the Title Generator **Text String**, you change simple texts into glowing 3D-objects.

- Open a new animation and save it as „Metals.M3".
- In the **Browser**-Window, click onto **Objects / Title Generators** and double-click onto **Text String**.



Text in action:
the Character Generator **Titler** animates texts 3-dimensionally.

MoviePack sets up a new video track.

- In the **Timeline**, rename the track to **Gold**.

In the middle of the screen, the **Title Generator** creates a sample text with the file ending „M3".

- Click onto **Colors** in the **Effect**-Box.
- Activate the **Off**-switch.

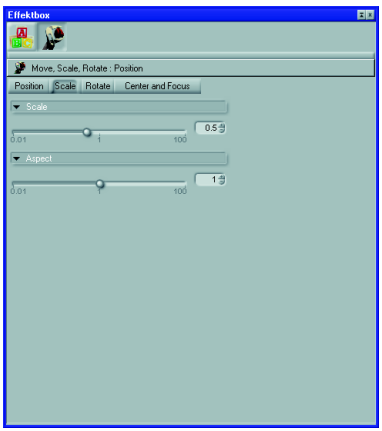
Switching on the text background

This way, the text background is switched on. You can now see the black sample text on a white background.

- Click onto the **Text**-button.
- In the entry field, change the text „M3" to „Gold".

The Title Generator **Text string** generates simple 2D-texts.

- Click onto the **Position**-button in the **Effect**-Box and afterwards onto **Scale**.



The function **Scale** defines the text size.

- For **Scale**, enter the value 0.5.
- In the **Timeline**, move the CTI to 0:00:03:00.
- Again, enter 0.5 for **Scale**.

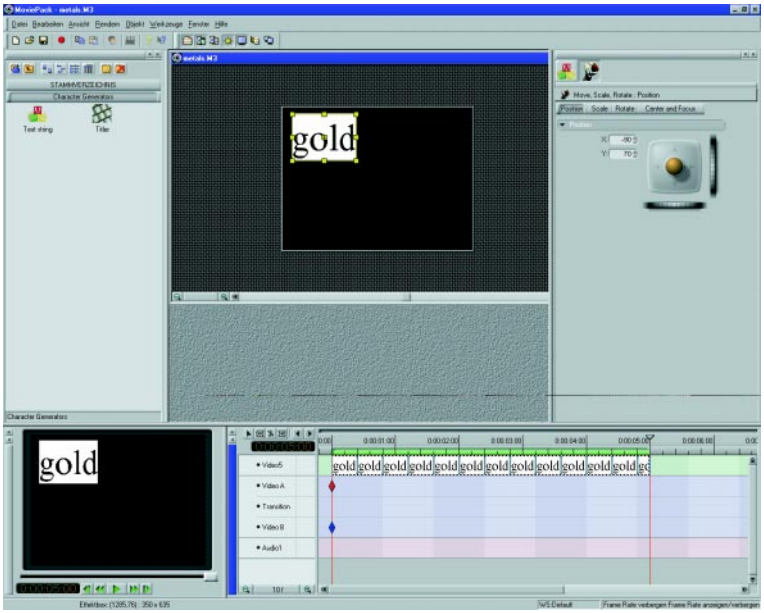
Now you have adjusted the size of the text for the entire duration.

- On the **Canvas**, move the text to the upper left corner (**Position 90 : 70**).

Motion path

Now you can see the motion path between the two keyframes at the beginning and the end of the animation.

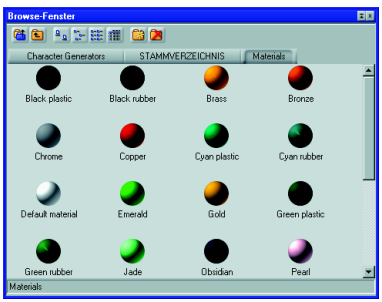
- Set the keyframe at the beginning in the **Canvas** to exactly match the end-keyframe in the corner (**Position 90 : 70**).



With the help of two identical keyframe-positions, the text remains at its fixed position.

The text now remains fixed at the same position. Check this by playing back your animation in the **Preview**.

- Generate a new tab in the **Browser**-Window by clicking onto the corresponding button. After that, double-click onto **Effects**.



Artistic design
Materialials add a special touch to your objects.

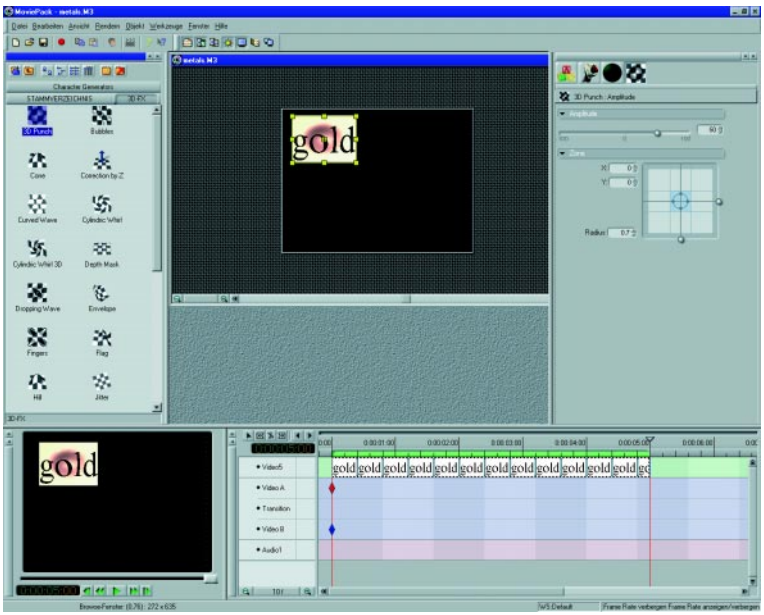
- Double-click onto **Materials** and **Gold**.

Now the background color of the text changes.

Changing the background color of the text

- Go back one level in the **Browser**-Window.
- Double-click onto **3D-FX** and **3D-Punch**.

The text now appears warped.

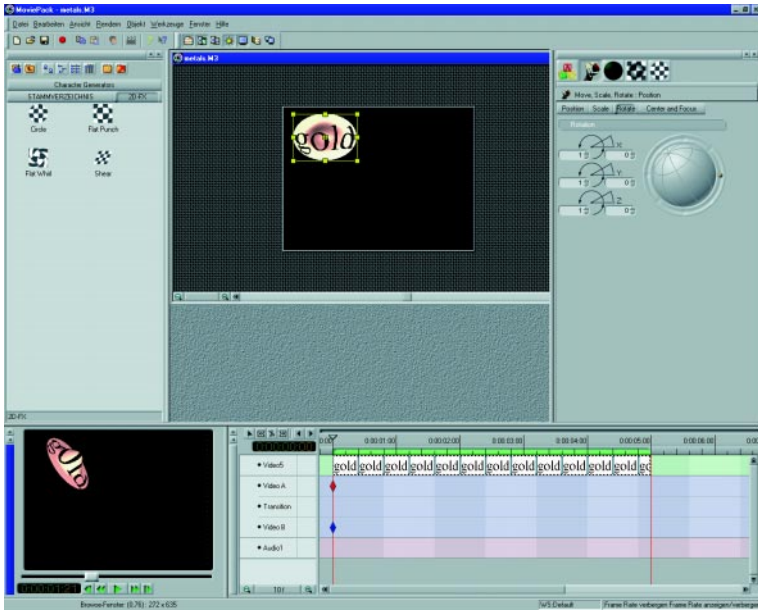


The strength and the position of the warp can be adjusted in the Effect-Box.

- Again, go back one level in the **Browser**-Window.
- Double-click onto **2D-FX** and **Circle**.

The text now has an oval form.

- In the **Timeline**, set the CTI to 0:00:00:00.
- Click onto the **Position**-button in the **Effect**-Box and afterwards onto **Rotate**.
- In the entry fields on the left, enter 1 in all of them. This serves for rotating the object around its own axis.
- Check the movement in the **Preview**.



A simple text is changed to a 3D-object by a combination of effects.

Second metal badge

Now you want to generate a second metal badge. One way to do that is to repeat the last steps. But there's a simpler way to go about it:

- In the **Timeline**, click onto the track labled Gold.
- Make sure the CTI is set to 0:00:00:00.

Pasting a copy in a new track

Above the track labled Gold, MoviePack now inserts a new video track. If the CTI is set to the end of the animation, a copy is pasted at the end of the same track.

- In the menu **Edit / Copy**, copy the entire track including all effects and changes to the clipboard an re-paste it via **Paste**.
- Rename video track 2 to „Silver".
- Move both keyframes to the upper right corner of the **Canvas**.

- In the **Effect**-Box, click onto the **Materials**-icon.
- In the menu **Copy / Delete**, delete the icon.

The second text has taken on its white background again.

Replacing the white background

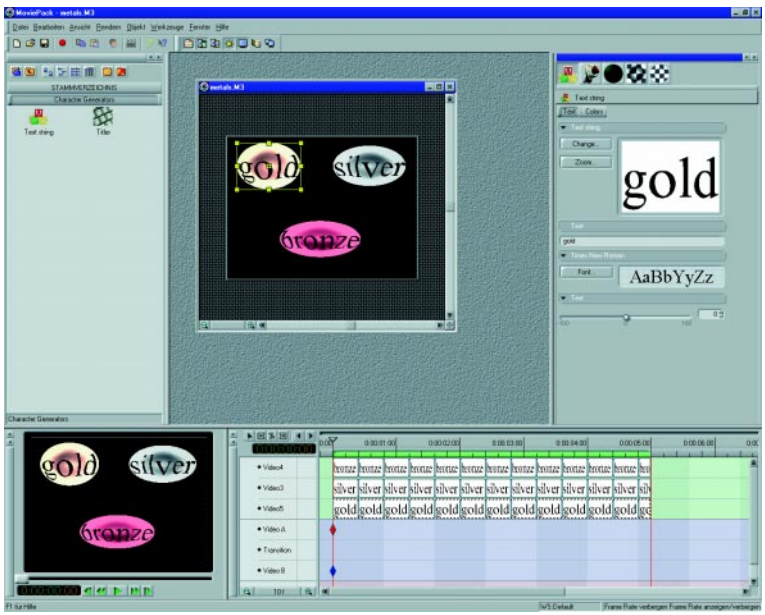
- In the **Browser**-Window, select the material **Silver**.

The second text changes its background color.

- In the **Timeline**, click onto the video track called „Silver".
- Via **Edit / Copy**, copy the entire track including all effects and changes to the clipboard.
- Make sure the CTI is set to 0:00:00:00.
- **Paste** the track from the clipboard.

MoviePack inserts a new track above the track called Silver.

- Rename video track 3 to „Bronze".
- Move both keyframes of the second text to the bottom middle.

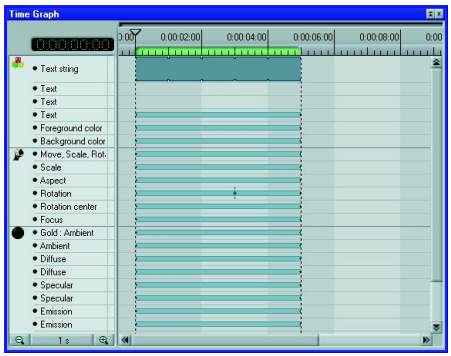


Objects can easily be moved with the positioning frames.

More natural motion by moving keyframes.

Have a look at the motion in the **Preview**. All three badges move evenly. That doesn't look very natural and innovative. So add some irregluarity to the movement by moving the keyframes in the **Timegraph**.

- In the **Timeline**, extend the duration of all three tracks to 5 seconds.
- Activate video track Gold with a mouse-click.
- Open the **Timegraph** with a mouse-click onto the icon in the **Palettes**-bar.
- In the **Timegraph**, keep the Ctrl-key depressed and move the end-keyframe to position 0:00:03:00.



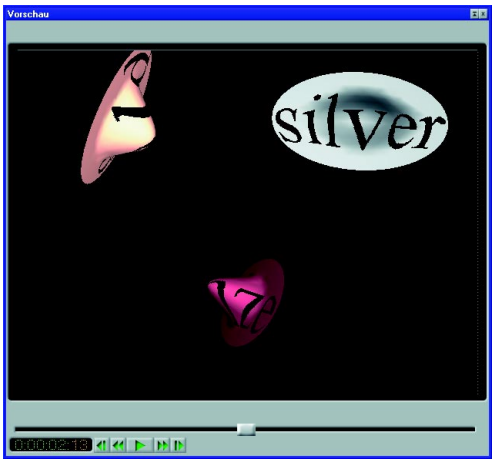
The keyframes in the **Timegraph** control all alterations of the animation.

- Generate a new keyframe by pressing the Ctrl-key.

Result: the golden badge stands still for 2 seconds until the end of the animation.

- Activate video track Silver with a mouse-click in the **Timeline**.
- In the **Timegraph**, keep the Ctrl-key depressed an set the start-keyframe to 0:00:01:00 and the end-keyframe to 0:00:04:00.
- Activate video track Bronze with a mouse-click in the **Timeline**.
- In the **Timegraph**, keep the Ctrl-key depressed an set the start-keyframe to 0:00:02:00.

Now look at the result in the **Preview** again. It looks as if all the badges are pushed by an invisible hand, one after the other.



Result: motion is much more interesting now!

Finally, add the final polish to your metals, because they still look a bit dull.

Inserting reflections

Now you are confronted with a typical problem of the 3D-world - highly polished materials reflect. As a result, the surrounding environment reflects off the surface of the object. Light sources reflect off the object as bright shiny spots. This pushes rendering programs to the limit when they try to simulate this behavior.
But there's a simple trick to keep rendering-times to a minimum: the material is embedded in a fog-like graphic, creating the illusion of a distorted reflection of the environment. But first you need to adjust the light sources. MoviePack features a number of invisible lights.

- Switch back to the **Objects**-level in the **Browser**-Window.
- Double-click onto **Lights & Cameras** and afterwards on **Omnidirectional Light**.

Adding light sources

A simulated light source is placed in the middle of the image in a new video track.

- Adjust the **Heigth** of the light to 20 at the start and end-keyframe.

You will notice that all three badges appear much more three-dimensional now.

- On the **Canvas**, grab the light source at the handles with both keyframes and move it to the left (**Position: –145 : –15**).
- Copy the light source to the clipboard (menu: **Edit / Copy** and paste it back in (menu: **Edit / Paste**).
- On the **Canvas**, grab the light source at the handles with both keyframes and move it to the right (**Position: 143 : 20**).

Now the metal character of the surfaces has increased significantly.

- In the **Timeline**, activate video track „Gold" with a mouse-click.
- In the **Browser**-Window, select **Effects / Image Control / Image Arithmetic"**.
- As sources, pick **Still image** and the graphic „Samples/Titler/Chrome.jpg".

The effetc **Image Arithmetic** places the graphic as an addition on the text.

- In the **Effect**-Box, change **Add** to **Multiply**.

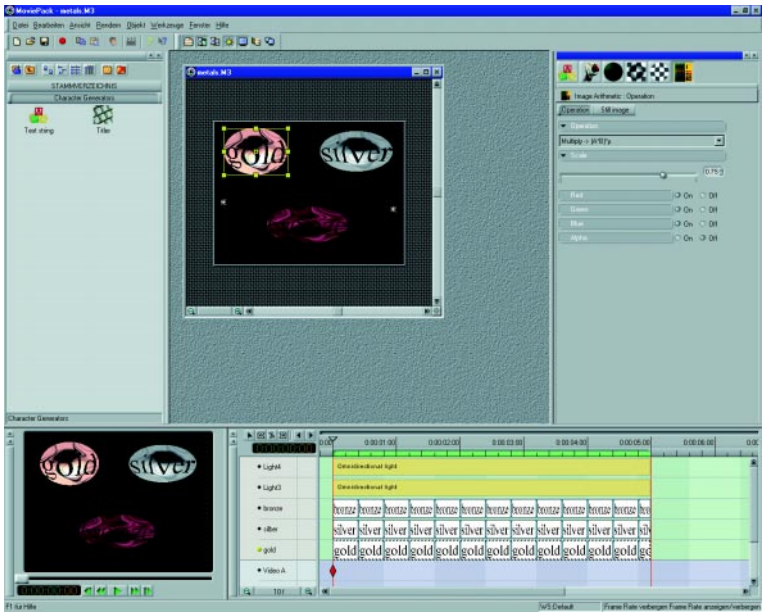
Increasing surface reflection

The surface now appears to be harder and stronger.

- Activate the video track Silver in the **Timeline** with a mouse-click.
- In the **Browser**-Window, double click onto **Image Arithmetic**.
- As sources, again pick the graphic „Samples/Titler/Chrome.jpg".
- In the **Effect**-Box, change **Add** to **Blend**.
- Compared to Gold, the surface appears to be a little more soft.

▶ Place **Image Arithmetic** on video track Bronze and change **Add** to **Subtract**.

Again the surface is slightly different now.



With a simple image arithmetc effect, the surface appears much more metallic.

In order for the clip to be even more diversified, add an animated background.

Whirl

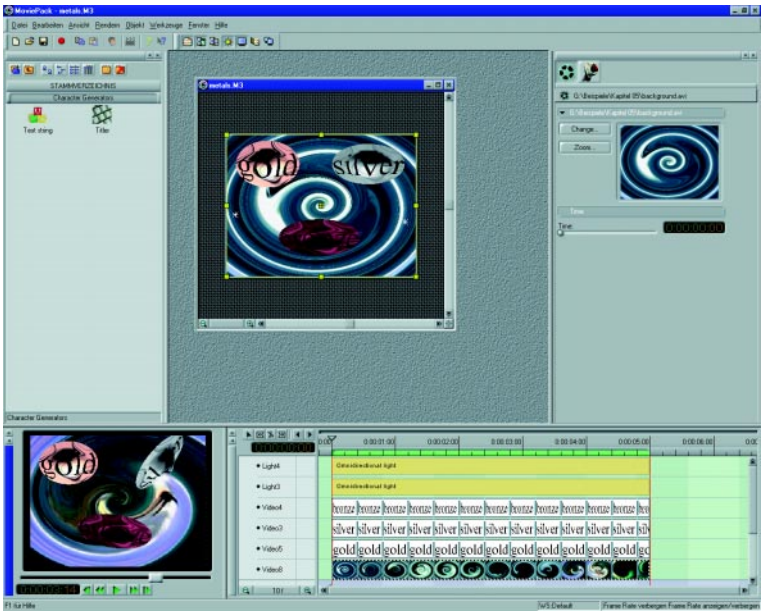
The video which you will be using now originally featured a surfer inside a big wave. With the **2D-FX**-effect **Flat Whirl** an interesting whirl was created. The white foam of the wave here has a somewhat psychedelic effect and harmonizes nicely with the reflections of the metal surfaces.

▶ In the **Timeline**, set the CTI to position 0:00:00:00 and activate the first video track.

▶ In the **Browser**-Window, select the clip „Samples/Titling/background.avi".

The clip positions itself over the first video track. In order for it to form the background, proceed as follows:

▶ Move the clip to video track Gold by pulling it.



The result:
an attractive 3D-animation

Now you have generated a small 3D-animation with MoviePack's simple text-function and various effects. Normally, you would need an expensive professional program for that.

Using the Titler

In the next exercise, you will learn about the second Title-Generator, the **Titler** and link your newly generated project with the next to form a new animation.

Optimal utilization of systems ressources by linking several video tracks

This linking saves systems ressources. The trick is based upon the fact that you can embedd a complete animation file in a new animation. This way, you won't loose the overview over your project and won't strain the system with the project track until you absolutely need to. However, a pre-requisite for that is the clear structuring of your project. For that, the Storyboard comes in really handy.

Simulating a draft of air

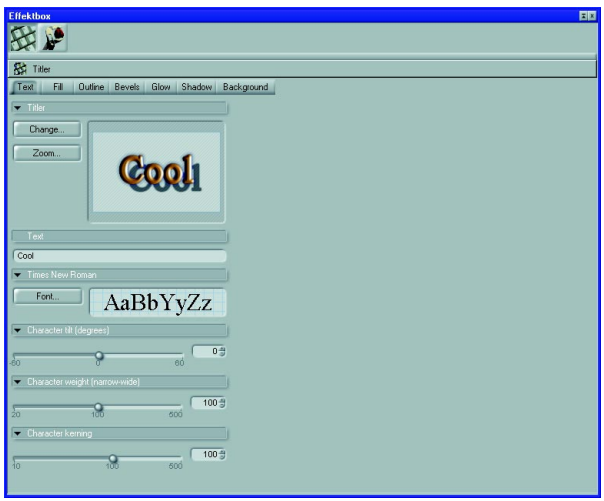
The aim of the new animation is to let the text „Cool Metals" fly across the three badges you have already generated, thus creating the impression that the rush of air of the passing text is whirling the metal badges around.

- Open a new file and save it as „Cool_metals.M3".
- In the **Browser**-Window, click onto the tab **Character Generators** and double-click onto **Titler**.

A new video track is generated with a three-dimensional „M3" placed in the middle.

In the **Effect**-Box, you will see that this Title Generator has a few surprises in store for you.

- Replace the text M3 with „Cool ".



The program within the program: The many possibilities of the **Titler** leave no wish unfulfilled.

- Move the text out of the left upper corner of the **Canvas** (**Position -235 : 35**).
- Move the second keyframe out of the upper right corner of the **Canvas** (**Position –235 : 35**).
- In the **Timeline**, set the end of the clip to position 0:00:02:00.

Now the word Cool flies across the upper half of the screen from left to right for 2 seconds.

- In the **Browser**-Window, double-click onto **Titler**.
- In the **Effect**-Box, replace the sample text with the word „Metals".
- Move the text out of the right bottom corner of the **Canvas** (**Position 254 : -60**).
- Move the second keyframe out of the left bottom corner of the **Canvas** (**Position –254 : -60**).
- In the **Timeline**, set the beginning of the clip to position 0:00:02:00 and the end of the clip to position 0:00:04:00.

Now the word Metals flies across the lower half of the screen from right to left for 2 seconds.

- In the **Browser**-Window, double-click onto **Titler**.

Replacing the sample text

- In the Effect-Box, replace the sample text with „Cool Metals".
- In the **Timeline**, set the beginning of the clip to position 0:00:04:00 and the end to position 0:00:05:00.
- In the timeline, set the CTI to position 0:00:04:00.
- In the **Effect**-Box, click onto the **Position**-icon and afterwards onto **Scale**.
- Move the slider all the way to the left to 0.01.
- Set the CTI in the **Timeline** to position 0:00:05:00.
- In the **Effect**-Box, move the slider for scaling to the middle (1).

The text Cool Metals comes zooming out of the depth into the middle of the screen.

The shadow settings of the letters add depth to the animation.