

# The Morph-collection

The Morphing-Tools for Final Cut Pro by chv-electronics

## General Info

This collection of plugins makes it possible to do morph-effects directly with Final Cut Pro and Final Cut Express. The collection consists of 36 plugins to cover all kinds of morph capabilities. There are three groups of plugins:

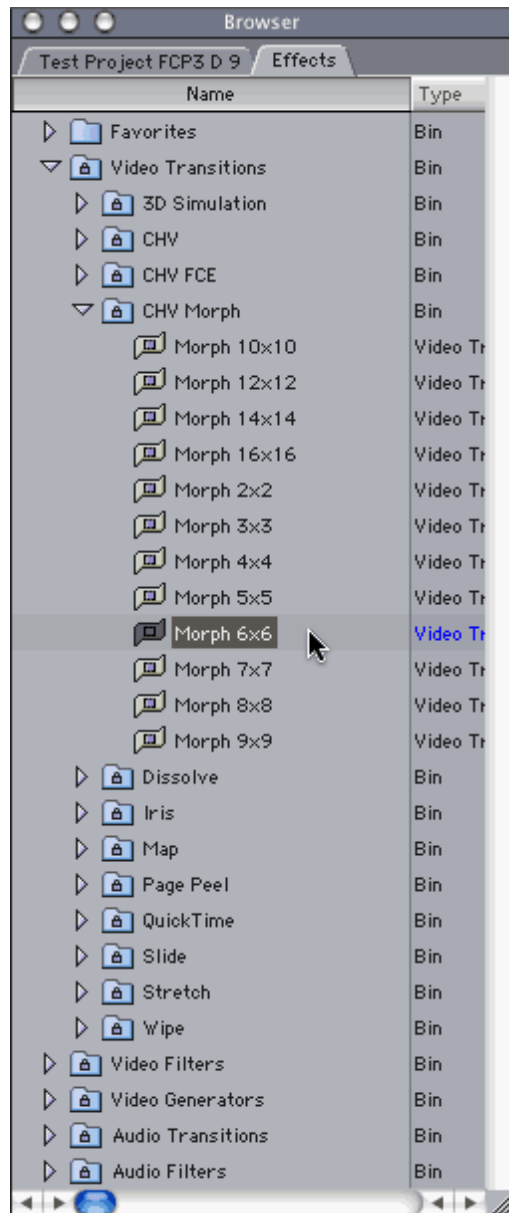
1. **Transitions:** With the 12 Morph-transitions you can do a Morph from one still to another. For animated clips you should use the Morph-generator, due to the inability of Final Cut to set keyframes for transitions.
2. **Generators:** The 12 Morph-generators are perfect to generate morph-effects with animated clips. The ability to set keyframes makes it easy to handle animated clips.
3. **Filters:** The 12 Morph-filters are very special. Actually they should be called "Distortion-filters" and something similar, because they are mainly used to distort a picture or a clip, but these plugins are based on the same functions as the transitions and the generators. That's why they are also called "Morph". With the filters you can move specific points of a clip or an image to definable positions. For example: You can move the eyes of a face further apart while the clip is running. How this looks and what you can also do with the filters is described later in this manual.

In order to do a Morph you have to set two grids. One grid is applied to the source and the other is either applied to a destination-clip (transition and generator) or it is used as a morph-grid (filter). The Source-grid defines the source-points and the Morph-grid (Destination-grid) defines where the points of the Source-grid have to go.

Each section consists of 12 different versions. The only difference are the sizes of the used grids. The smallest grid has 2x2 points (even though it has actually 2x3 points) and the biggest grid has 16x16 points.

# The Morph-transitions

## Morph-transition: Browser and Timeline

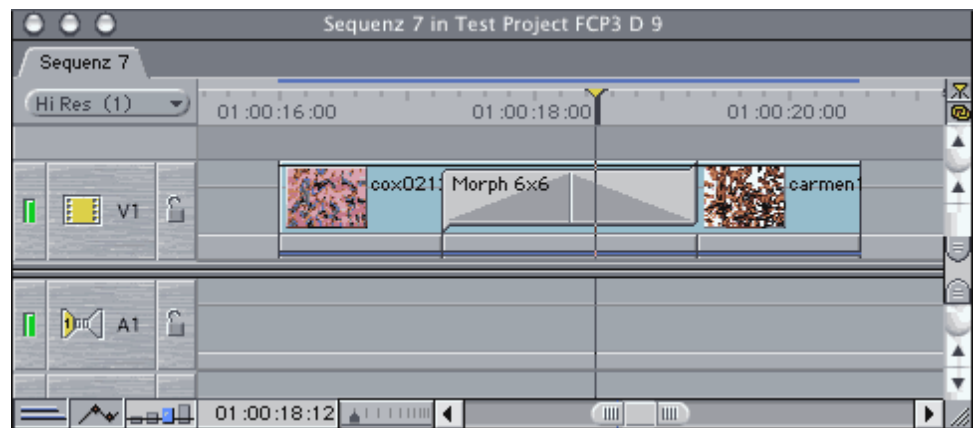


After installing the **Morph** plugins, you can find them in the effects-tab of the browser-window as seen to the left.

This section only describes the **Morph-transition**. The generators and the filters are described in a later section.

Open the folder "Video Transitions". There you will find a folder named "CHV Morph". Open it as well.

Drag and drop the desired Morph-transition onto the edit point of the two clips in the timeline. You can adjust the length of the transition on the Timeline by dragging the sides of the transition to the left or right.



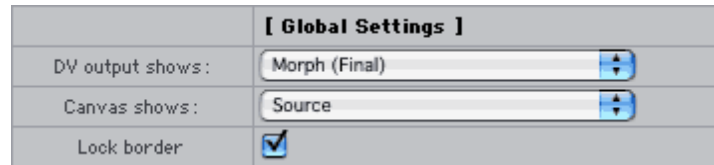
Double-click the transition on the timeline and it will open in the Viewer window. Now you can configure the transition to your personal needs.

The red line in the timeline above the transition shows that it needs to be rendered before playback. Click the transition in the timeline once and press Apple-R to render this part.

*Use the Morph-transitions only on still-images. Final Cut does not provide us with keyframes for transitions, therefore it is not possible to animate the grids.*

## Morph-transition: Configuration

The first set of controls what you can see in the canvas and on the DV-output of your Mac and the behavior of the border-points.



**DV output shows:** With this popup-menu you can select what you will see on the DV-output of your Mac. You have to connect a monitor to the DV-output of your Mac in order to see the effects of this setting. You can also control what you can see in the "Quickview"-window. And it also defines what will be rendered when you render the clip (Apple-R).

### **Source**

This setting will display the Source-clip.

### **Destination**

This setting will display the Destination-clip.

### **Source / Destination / Morph**

This will show a combination of the Source-clip, the Destination-clip and the final Morph.

### **Morph with Grid**

This shows the final Morph with the Morph-Grid.

### **Morph (Final)**

This will show the final Morph. Use this setting to render the final Morph!

**Very important: Set this setting to "Morph (Final)" in order to render the final Morph!!**

**Canvas shows:** This popup-menu defines what you will see in the canvas:

### **Source**

This setting will display the Source-clip.

### **Destination**

This setting will display the Destination-clip.

### **Source / Destination / Morph**

This will show a combination of the Source-clip, the Destination-clip and the final Morph.

### **Morph with Grid**

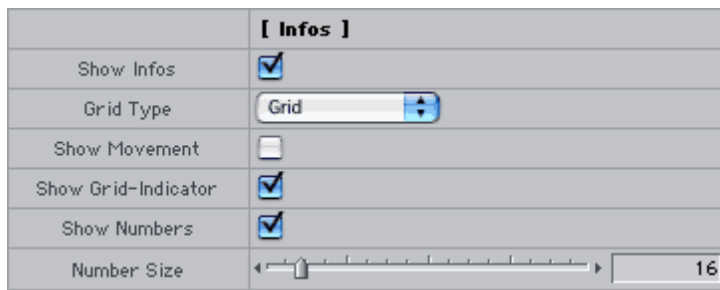
This shows the final Morph with the Morph-Grid.

### **Morph (Final)**

This will show the final Morph.

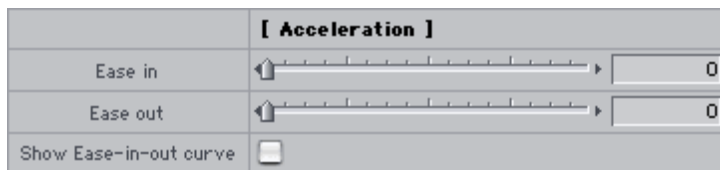
**Lock border** If you uncheck this checkbox, you will be able to move the points of both grids away from the border. If this checkbox is checked all points on the border will be locked to the border and can only be moved on the border.

This section controls what kind of additional information will be displayed on screen.



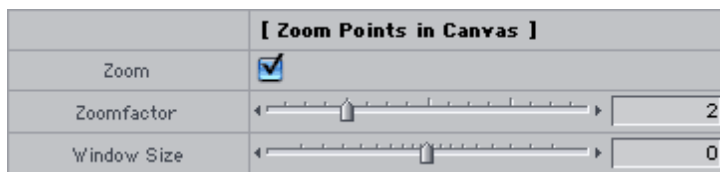
Show Infos	Check this checkbox to see the grids and all other informations. This settings has no effect in the <b>Morph (Final)</b> -Mode.
Grid Type	Select what type of grid you want to see.  <b>Off</b> No grid will be displayed.  <b>Grid</b> A grid will be displayed.  <b>Dots</b> Only the points of the grid will be displayed.
Show Movement	Check this to display the movement of the grid over time. A magenta line will be drawn on screen at each point which is moved over time.
Show Grid-Indicator	Check this checkbox to see an indicator on screen that tells you which grid is currently used. This does help to avoid mix-ups of the First-grid and the Second-grid.
Show Numbers	Check this checkbox to see the signs of the points.
Number Size	This slider defines the size of the grid-numbers.

With this section you can define the acceleration of the morph-effect. This is necessary, because Final Cut does not support keyframes within transitions and therefore it is not possible to change the behavior of a transition over time.



Ease in	This defines the amount of the ease-in effect.
Ease out	This defines the amount of the ease-out effect.
Show Ease-in-out curve	Check this checkbox to enable a small window in the canvas showing you the ease-in-out-curve.

Here you can define the configuration of the Zoom-window. If you move a point a window will be displayed on screen showing you a zoom of the exact point that is moved. The window is either in the upper left area or the upper right area of the screen, depending on the current position of the point.



Zoom	This checkbox enables the zoom-function.
Zoomfactor	Here you can set the zoomfactor.
Window Size	This slider defines the size of the zoom-window.

This section defines the assignment of the grids.



With this popup-menu you can select which grid will be applied to the Source and to the Destination. This is very useful if you want to create a morph that goes back and forth. To do this, just make copy the first image by dragging it while you hold down the ALT-key and drop it behind the second image. Now make a copy of the transition used for the first morph to the second edit-point. You can also do this by dragging the transition while you hold down the ALT-key. Double-click the new transition and change the setting above to the second option. Now you only have to render the transition.

## The First-grid

[ First Grid ]	
Show Numbers of Row 1	<input checked="" type="checkbox"/>
First Grid: A1	<input type="text" value="+"/> <input type="text" value="-360"/> , <input type="text" value="-288"/>
First Grid: B1	<input type="text" value="+"/> <input type="text" value="-216"/> , <input type="text" value="-288"/>
First Grid: C1	<input type="text" value="+"/> <input type="text" value="-72"/> , <input type="text" value="-288"/>
First Grid: D1	<input type="text" value="+"/> <input type="text" value="72"/> , <input type="text" value="-288"/>
First Grid: E1	<input type="text" value="+"/> <input type="text" value="216"/> , <input type="text" value="-288"/>
First Grid: F1	<input type="text" value="+"/> <input type="text" value="360"/> , <input type="text" value="-288"/>
Show Numbers of Row 2	<input checked="" type="checkbox"/>
First Grid: A2	<input type="text" value="+"/> <input type="text" value="-360"/> , <input type="text" value="-172.8"/>
First Grid: B2	<input type="text" value="+"/> <input type="text" value="-288"/> , <input type="text" value="-172.8"/>
First Grid: C2	<input type="text" value="+"/> <input type="text" value="-144"/> , <input type="text" value="-172.8"/>
First Grid: D2	<input type="text" value="+"/> <input type="text" value="0"/> , <input type="text" value="-172.8"/>
First Grid: E2	<input type="text" value="+"/> <input type="text" value="144"/> , <input type="text" value="-172.8"/>
First Grid: F2	<input type="text" value="+"/> <input type="text" value="288"/> , <input type="text" value="-172.8"/>
First Grid: G2	<input type="text" value="+"/> <input type="text" value="360"/> , <input type="text" value="-172.8"/>
Show Numbers of Row 3	<input checked="" type="checkbox"/>
First Grid: A3	<input type="text" value="+"/> <input type="text" value="-360"/> , <input type="text" value="-57.6"/>
First Grid: B3	<input type="text" value="+"/> <input type="text" value="-216"/> , <input type="text" value="-57.6"/>
First Grid: C3	<input type="text" value="+"/> <input type="text" value="-72"/> , <input type="text" value="-57.6"/>
First Grid: D3	<input type="text" value="+"/> <input type="text" value="72"/> , <input type="text" value="-57.6"/>
	<input type="text" value="+"/> <input type="text" value="216"/> , <input type="text" value="-57.6"/>

These are the actual points of the First-grid. These points are used to define the grid of the Source or the Destination, depending on the setting of the popup-menu directly above this section. Depending which Morph-plugin you have applied, this section show more or less rows and points.

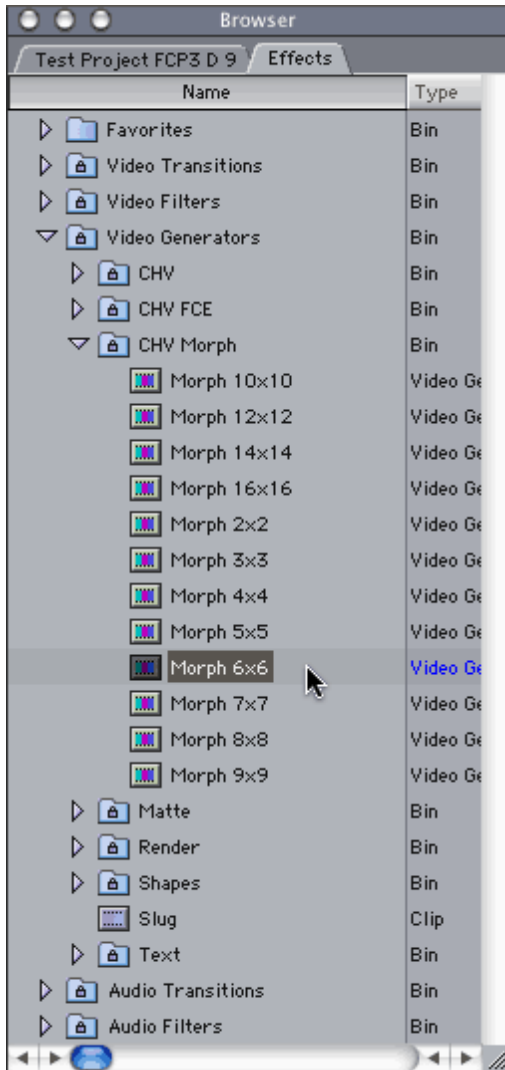
The points are divided in small sections each containing the points of a single row. The rows start on top of the screen. Higher row-numbers are further down on the screen.

Use the checkbox "Show numbers of Row" to disable the numbers of the row on the screen if they overlap the area you like to edit.



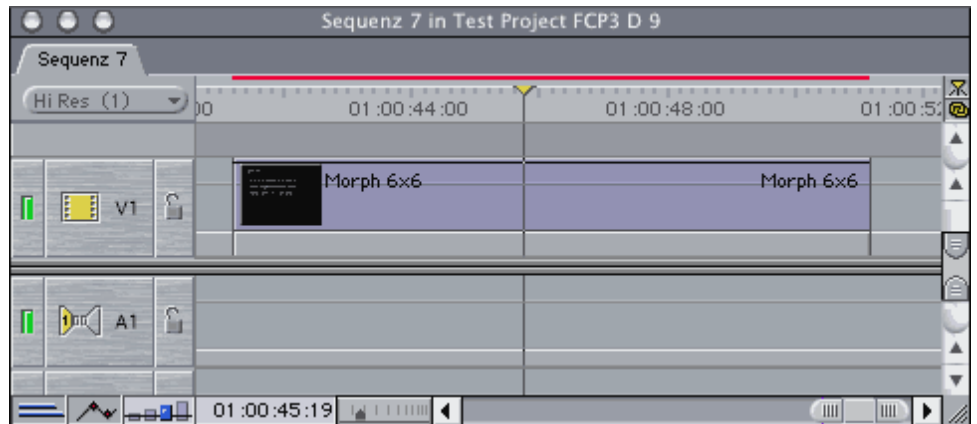
# The Morph-generators

## Morph-generator: Browser and Timeline



This section describes the **Morph-generators**.

Generators are different than Transitions and Filters which are always applied to clips. Generators are clips by themselves. The example below shows the "Morph 6x6"-generator.



Open the Effects-tab in the Browser. Now open the folder "Video Generators". There you will find a folder named "CHV Morph". Open it as well.

Just drag and drop the desired Morph-plugin on an empty place in the timeline. The clips you want to morph have to be applied to the Morph-plugin within the controls.

Double-click the generator in the timeline. The viewer will open. Click on the "Controls"-tab. Now you see the controls of the Morph-generator. Now you can make the necessary changes of the controls.

The red line above the generator shows which part of it is not rendered yet. Select the generator in the timeline once and press Apple-R to render this part.

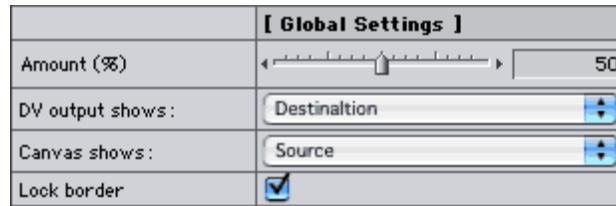
## Morph-generator: Configuration

The first section is used to apply the Source-clip and the Destination-clip.



[ Source Clip ]	
Clip/Image	To apply the Source-clip just drag and drop the desired clip from the browser onto this well.
Offset	If you don't want to use the clip from the beginning you can define the needed offset here.
[ Destination Clip ]	
Clip/Image	To apply the Destination-clip just drag and drop the desired clip from the browser onto this well.
Offset	If you don't want to use the clip from the beginning you can define the needed offset here.

This set of controls defines the amount of the morph effect, what you can see in the canvas and on the DV-output of your Mac and the behavior of the border-points.



Amount (%)	This slider defines the amount of the morph effect. A setting of 100 applies the full effect. A setting below 100 will interpolate the morph effect between the Source-grid and the Destination-grid.
DV output shows:	<p>With this popup-menu you can select what you will see on the DV-output of your Mac. You have to connect a monitor to the DV-output of your Mac in order to see the effects of this setting. You can also control what you can see in the "Quickview"-window. And it also defines what will be rendered when you render the clip (Apple-R).</p> <p><b>Source</b> This setting will display the Source-clip.</p> <p><b>Destination</b> This setting will display the Destination-clip.</p> <p><b>Source / Destination / Morph</b> This will show a combination of the Source-clip, the Destination-clip and the final Morph.</p> <p><b>Morph with Grid</b> This shows the final Morph with the Morph-Grid.</p> <p><b>Morph (Final)</b> This will show the final Morph. Use this setting to render the final Morph!</p> <p><b>Very important: Set this setting to "Morph (Final)" in order to render the final Morph!!</b></p>
Canvas shows:	<p>This popup-menu defines what you will see in the canvas:</p> <p><b>Source</b> This setting will display the Source-clip.</p> <p><b>Destination</b> This setting will display the Destination-clip.</p> <p><b>Source / Destination / Morph</b> This will show a combination of the Source-clip, the Destination-clip and the final Morph.</p> <p><b>Morph with Grid</b> This shows the final Morph with the Morph-Grid.</p> <p><b>Morph (Final)</b> This will show the final Morph.</p>
Lock border	If you uncheck this checkbox, you will be able to move the points of both grids away from the border. If this checkbox is checked all points on the border will be locked to the border and can only be moved on the border.

This section controls what kind of additional information will be displayed on screen.

[ Infos ]	
Show Infos	<input checked="" type="checkbox"/>
Grid Type	Grid
Show Movement	<input type="checkbox"/>
Show Grid-Indicator	<input checked="" type="checkbox"/>
Show Numbers	<input checked="" type="checkbox"/>
Number Size	<input type="range" value="16"/>

Show Infos	Check this checkbox to see the grids and all other informations. This settings has no effect in the <b>Morph (Final)</b> -Mode.
Grid Type	Select what type of grid you want to see.  <b>Off</b> No grid will be displayed.  <b>Grid</b> A grid will be displayed.  <b>Dots</b> Only the points of the grid will be displayed.
Show Movement	Check this to display the movement of the grid over time. A magenta line will be drawn on screen at each point which is moved over time.
Show Grid-Indicator	Check this checkbox to see an indicator on screen that tells you which grid is currently used. This does help to avoid mix-ups of the Source-grid and the Morph-grid.
Show Numbers	Check this checkbox to see the signs of the points.
Number Size	This slider defines the size of the grid-numbers.

Here you can define the configuration of the Zoom-window. If you move a point a window will be displayed on screen showing you a zoom of the exact point that is moved. The window is either in the upper left area or the upper right area of the screen, depending on the current position of the point.

[ Zoom Points in Canvas ]	
Zoom	<input checked="" type="checkbox"/>
Zoomfactor	<input type="range" value="2"/>
Window Size	<input type="range" value="0"/>

Zoom	This checkbox enables the zoom-function.
Zoomfactor	Here you can set the zoomfactor.
Window Size	This slider defines the size of the zoom-window.

## The Source-grid

[ Source Grid ]	
Show Numbers of Row 1	<input checked="" type="checkbox"/>
Source Grid: A1	<input type="text" value="(-) -360 ,"/> <input type="text" value="(-) -288"/>
Source Grid: B1	<input type="text" value="(-) -216 ,"/> <input type="text" value="(-) -288"/>
Source Grid: C1	<input type="text" value="(-) -72 ,"/> <input type="text" value="(-) -288"/>
Source Grid: D1	<input type="text" value="(+ ) 72 ,"/> <input type="text" value="(-) -288"/>
Source Grid: E1	<input type="text" value="(+ ) 216 ,"/> <input type="text" value="(-) -288"/>
Source Grid: F1	<input type="text" value="(+ ) 360 ,"/> <input type="text" value="(-) -288"/>
Show Numbers of Row 2	<input checked="" type="checkbox"/>
Source Grid: A2	<input type="text" value="(-) -360 ,"/> <input type="text" value="(-) -172.8"/>
Source Grid: B2	<input type="text" value="(-) -288 ,"/> <input type="text" value="(-) -172.8"/>
Source Grid: C2	<input type="text" value="(-) -144 ,"/> <input type="text" value="(-) -172.8"/>
Source Grid: D2	<input type="text" value="(+ ) 0 ,"/> <input type="text" value="(-) -172.8"/>
Source Grid: E2	<input type="text" value="(+ ) 144 ,"/> <input type="text" value="(-) -172.8"/>
Source Grid: F2	<input type="text" value="(+ ) 288 ,"/> <input type="text" value="(-) -172.8"/>
Source Grid: G2	<input type="text" value="(+ ) 360 ,"/> <input type="text" value="(-) -172.8"/>
Show Numbers of Row 3	<input checked="" type="checkbox"/>
Source Grid: A3	<input type="text" value="(-) -360 ,"/> <input type="text" value="(-) -57.6"/>
Source Grid: B3	<input type="text" value="(-) -216 ,"/> <input type="text" value="(-) -57.6"/>
Source Grid: C3	<input type="text" value="(-) -72 ,"/> <input type="text" value="(-) -57.6"/>
Source Grid: D3	<input type="text" value="(+ ) 72 ,"/> <input type="text" value="(-) -57.6"/>
Source Grid: E3	<input type="text" value="(+ ) 216 ,"/> <input type="text" value="(-) -57.6"/>
Source Grid: F3	<input type="text" value="(+ ) 360 ,"/> <input type="text" value="(-) -57.6"/>
Show Numbers of Row 4	<input checked="" type="checkbox"/>
Source Grid: A4	<input type="text" value="(-) -360 ,"/> <input type="text" value="(-) -57.6"/>

These are the actual points of the Source-grid. These points are used to define the Source-grid. Depending which Morph-plugin you have applied, this section show more or less rows and points.

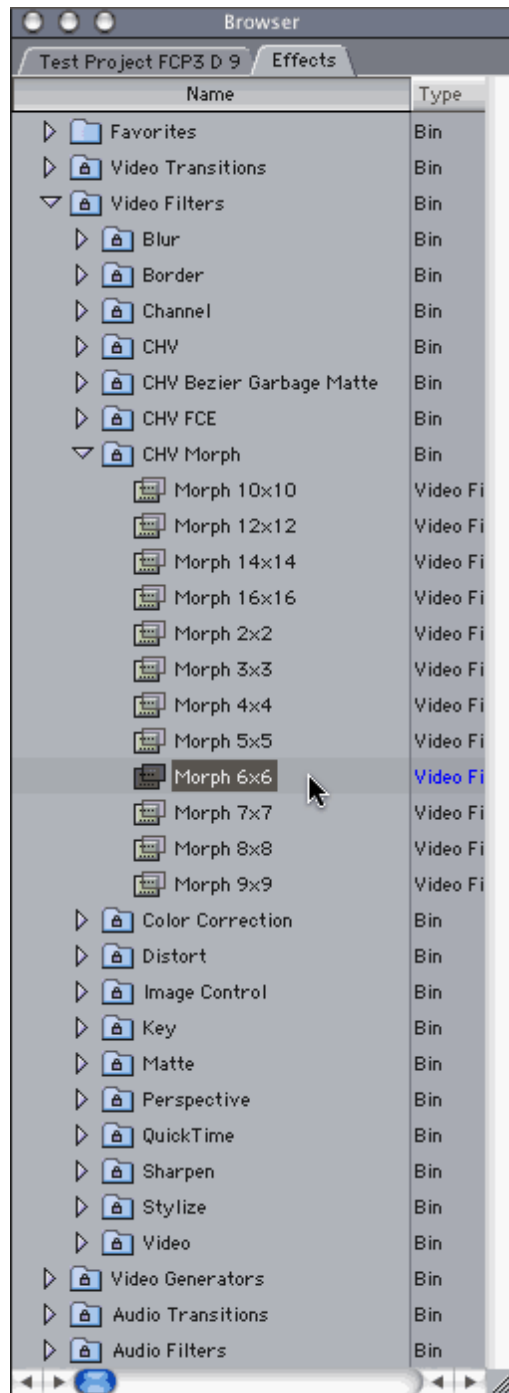
The points are divided in small sections each containing the points of a single row. The rows start on top of the screen. Higher row-numbers are further down on the screen.

Use the checkbox "Show numbers of Row" to disable the numbers of the row on the screen if they overlap the area you like to edit.



# The Morph-filters

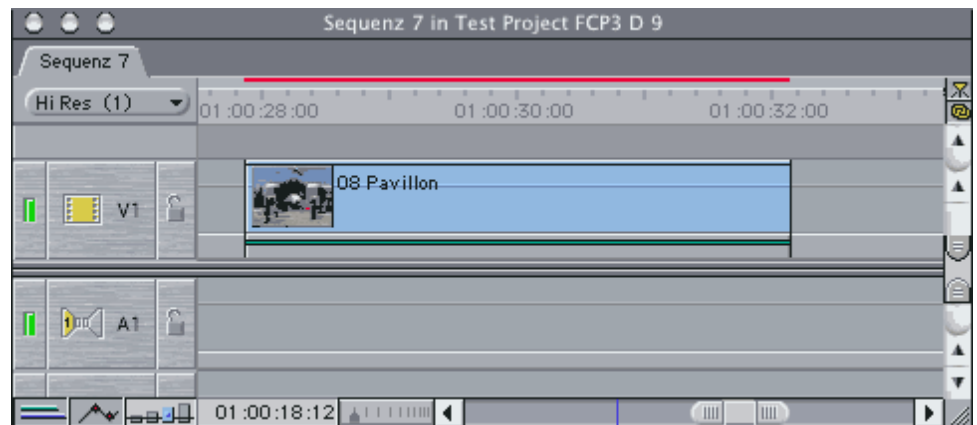
## Morph-filter: Browser and Timeline



This section describes the **Morph-filters**.

Open the Effects-tab in the Browser. Now open the folder "Video Filters". There you will find a folder named "CHV Morph". Open it as well.

If you want to use a filter you just have to drag and drop the desired filter onto the clip in the timeline. If you apply the big grids (9x9 - 16x16) it might take a couple of seconds for Final Cut to apply the filter.



If you have turned on the "Clip Keyframes"-button (red arrow) you can see a green line under the clip. This line indicates that you have successfully applied the filter to the clip.

Double-click the clip on the timeline to load it into the viewer. Click on the "Filters"-tab. There you can find the Morph-filter. Now you can make the necessary changes.

The red line above the filter shows which part of the clip is not rendered yet. Select the clip in the timeline once and press Apple-R to render this part.

## Morph-filter: Configuration

The first set of controls defines the amount of the morph effect, what you can see in the canvas and on the DV-output of your Mac and the behavior of the border-points.



**Amount (%)** This slider defines the amount of the morph (distortion) effect. A setting of 100 applies the full effect. A setting below 100 will interpolate the effect between the Source-grid and the Morph-grid.

**DV output shows:** With this popup-menu you can select what you will see on the DV-output of your Mac. You have to connect a monitor to the DV-output of your Mac in order to see the effects of this setting. You can also control what you can see in the "Quickview"-window. And it also defines what will be rendered when you render the clip (Apple-R).

**Source**

This setting will display the Source-clip.

**Source / Morph**

This will show a combination of the Source-clip and the final Morph.

**Morph with Grid**

This shows the final Morph with the Morph-Grid.

**Morph (Final)**

This will show the final Morph. Use this setting to render the final Morph!

**Very important: Set this setting to "Morph (Final)" in order to render the final Morph!!**

**Canvas shows:** This popup-menu defines what you will see in the canvas:

**Source**

This setting will display the Source-clip.

**Source / Morph**

This will show a combination of the Source-clip and the final Morph.

**Morph with Grid**



This shows the final Morph with the Morph-Grid.

**Morph (Final)**

This will show you the final Morph.



**Lock border** If you uncheck this checkbox, you will be able to move the points of both grids away from the border. If this checkbox is checked all points on the border will be locked to the border and can only be moved on the border.

This section controls what kind of additional information will be displayed on screen.

[ Infos ]	
Show Infos	<input checked="" type="checkbox"/>
Grid Type	Grid 
Show Movement	<input type="checkbox"/>
Show Grid-Indicator	<input checked="" type="checkbox"/>
Show Numbers	<input checked="" type="checkbox"/>
Number Size	 16

Show Infos	Check this checkbox to see the grids and all other informations. This settings has no effect in the <b>Morph (Final)</b> -Mode.
Grid Type	Select what type of grid you want to see.  <b>Off</b> No grid will be displayed.  <b>Grid</b> A grid will be displayed.  <b>Dots</b> Only the points of the grid will be displayed.
Show Movement	Check this to display the movement of the grid over time. A magenta line will be drawn on screen at each point which is moved over time.
Show Grid-Indicator	Check this checkbox to see an indicator on screen that tells you which grid is currently used. This does help to avoid mix-ups of the Source-grid and the Morph-grid.
Show Numbers	Check this checkbox to see the signs of the points.
Number Size	This slider defines the size of the grid-numbers.

Here you can define the configuration of the Zoom-window. If you move a point a window will be displayed on screen showing you a zoom of the exact point that is moved. The window is either in the upper left area or the upper right area of the screen, depending on the current position of the point.

[ Zoom Points in Canvas ]	
Zoom	<input checked="" type="checkbox"/>
Zoomfactor	 2
Window Size	 0

Zoom	This checkbox enables the zoom-function.
Zoomfactor	Here you can set the zoomfactor.
Window Size	This slider defines the size of the zoom-window.

## The Source-grid

[ Source Grid ]	
Show Numbers of Row 1	<input checked="" type="checkbox"/>
Source Grid: A1	<input text"="" type="text" value="(-) -330"/>
Source Grid: B1	<input text"="" type="text" value="(-) -330"/>
Source Grid: C1	<input text"="" type="text" value="(-) -330"/>
Source Grid: D1	<input text"="" type="text" value="(-) -330"/>
Source Grid: E1	<input text"="" type="text" value="(-) -330"/>
Source Grid: F1	<input text"="" type="text" value="(-) -330"/>
Show Numbers of Row 2	<input checked="" type="checkbox"/>
Source Grid: A2	<input text"="" type="text" value="(-) -198"/>
Source Grid: B2	<input text"="" type="text" value="(-) -198"/>
Source Grid: C2	<input text"="" type="text" value="(-) -198"/>
Source Grid: D2	<input text"="" type="text" value="(-) -198"/>
Source Grid: E2	<input text"="" type="text" value="(-) -198"/>
Source Grid: F2	<input text"="" type="text" value="(-) -198"/>
Source Grid: G2	<input text"="" type="text" value="(-) -198"/>
Show Numbers of Row 3	<input checked="" type="checkbox"/>
Source Grid: A3	<input text"="" type="text" value="(-) -66"/>
Source Grid: B3	<input text"="" type="text" value="(-) -66"/>
Source Grid: C3	<input text"="" type="text" value="(-) -66"/>
Source Grid: D3	<input text"="" type="text" value="(-) -66"/>
Source Grid: E3	<input text"="" type="text" value="(-) -66"/>
Source Grid: F3	<input text"="" type="text" value="(-) -66"/>
Show Numbers of Row 4	<input checked="" type="checkbox"/>
Source Grid: A4	<input text"="" type="text" value="(+ ) 66"/>
	<input text"="" type="text" value="(-) -66"/>

These are the actual points of the Source-grid. These points are used to define the Source-grid. Depending which Morph-plugin you have applied, this section show more or less rows and points.

The points are divided in small sections each containing the points of a single row. The rows start on top of the screen. Higher row-numbers are further down on the screen.

Use the checkbox "Show numbers of Row" to disable the numbers of the row on the screen if they overlap the area you like to edit.

## The Morph-grid

[ Morph Grid ]	
Show Numbers of Row 1	<input checked="" type="checkbox"/>
Morph Grid: A1	+ <input type="text" value="-251.5"/> , <input type="text" value="-330"/>
Morph Grid: B1	+ <input type="text" value="-150.9"/> , <input type="text" value="-330"/>
Morph Grid: C1	+ <input type="text" value="-50.3"/> , <input type="text" value="-330"/>
Morph Grid: D1	+ <input type="text" value="50.3"/> , <input type="text" value="-330"/>
Morph Grid: E1	+ <input type="text" value="150.9"/> , <input type="text" value="-330"/>
Morph Grid: F1	+ <input type="text" value="251.5"/> , <input type="text" value="-330"/>
Show Numbers of Row 2	<input checked="" type="checkbox"/>
Morph Grid: A2	+ <input type="text" value="-251.5"/> , <input type="text" value="-198"/>
Morph Grid: B2	+ <input type="text" value="-201.2"/> , <input type="text" value="-198"/>
Morph Grid: C2	+ <input type="text" value="-100.6"/> , <input type="text" value="-198"/>
Morph Grid: D2	+ <input type="text" value="0"/> , <input type="text" value="-198"/>
Morph Grid: E2	+ <input type="text" value="100.6"/> , <input type="text" value="-198"/>
Morph Grid: F2	+ <input type="text" value="201.2"/> , <input type="text" value="-198"/>
Morph Grid: G2	+ <input type="text" value="251.5"/> , <input type="text" value="-198"/>
Show Numbers of Row 3	<input checked="" type="checkbox"/>
Morph Grid: A3	+ <input type="text" value="-251.5"/> , <input type="text" value="-66"/>
Morph Grid: B3	+ <input type="text" value="-150.9"/> , <input type="text" value="-66"/>
Morph Grid: C3	+ <input type="text" value="-50.3"/> , <input type="text" value="-66"/>
Morph Grid: D3	+ <input type="text" value="50.3"/> , <input type="text" value="-66"/>
Morph Grid: E3	+ <input type="text" value="150.9"/> , <input type="text" value="-66"/>
Morph Grid: F3	+ <input type="text" value="251.5"/> , <input type="text" value="-66"/>
Show Numbers of Row 4	<input checked="" type="checkbox"/>
Morph Grid: A4	+ <input type="text" value="-251.5"/> , <input type="text" value="66"/>
Morph Grid: B4	+ <input type="text" value="-201.2"/> , <input type="text" value="66"/>
Morph Grid: C4	+ <input type="text" value="-100.6"/> , <input type="text" value="66"/>

These are the actual points of the Morph-grid. These points are used to define the Morph-grid. Depending which Morph-plugin you have applied, this section show more or less rows and points.

The points are divided in small sections each containing the points of a single row. The rows start on top of the screen. Higher row-numbers are further down on the screen.

Use the checkbox "Show numbers of Row" to disable the numbers of the row on the screen if they overlap the area you like to edit.

These settings are only needed if the clip interferes with the informations on the screen. Normally you don't need to change these settings. All informations drop a small shadow, so even a yellow grid is clearly visible on a yellow background.

[ Colors ]	
Source-Grid	<input type="color" value="#FFD700"/>
Morph-Grid	<input type="color" value="#FF00FF"/>
Movement	<input type="color" value="#00CED1"/>
Numbers	<input type="color" value="#FFFFFF"/>
Grid-Indicator	<input type="color" value="#00FF00"/>
www.chv-plugins.com, Chris	
Morph 6x6 V3.0	

Source-Grid	This defines the color of the Source-grid.
Morph-Grid	This defines the color of the Morph-grid.
Movement	This defines the color of the line that shows the difference (movement) between the Source-grid and the Morph-grid.
Numbers	This defines the color of the numbers of the grid.
Grid-Indicator	This defines the color of the grid-indicator.

# How-to.....

## Tutorial - General Info

This section describes how to create successfully a good looking morph.

First you have to select the footage you want to morph. The source-material should consist of "similar" footage. In order to do a morph, you have to tell the software the shape of the source- and the destination-material. This is done by a grid that you have to apply to the footage. With these grids you have to define similar parts of the footage.

You can easily morph a cat into a dog, but if they are seen from the side, you have to make sure that both animals look into the same direction. If the cat looks to the left and the dog to the right, you would have quite some problems to define the necessary grid.

If you use still-images you can use the Morph-transitions and the Morph-generators. If you use video-clips, you should use the Morph-generator. Unfortunately Final Cut does not provide us with keyframes for transitions, therefore it is impossible for the grid to follow the moving parts. This disadvantage does not exist if you use the Morph-generators.

The Morph-filter does not do a morph. Instead of you can distort the footage with the advantage of using keyframes. You can compare it with a morph from an image to itself. This makes it easy to move an eye on a face to a different location.

Remember: It is a great help to hook a monitor to the DV-output of you Mac. If you don't have a monitor with a DV-input or you don't own a DV-recorder with a monitor-output to be used as a converter, you can also use a DV-camera with a monitor that has the ability to use it's DV-connector as an input. If you use Final Cut Pro 3 you can also use the "Quickview" window. Remember that you have to update the "Quickview" window manually (just click in it's timeline once) after you have changed a setting of the Morph-transition.

## Do a Morph using two still-images

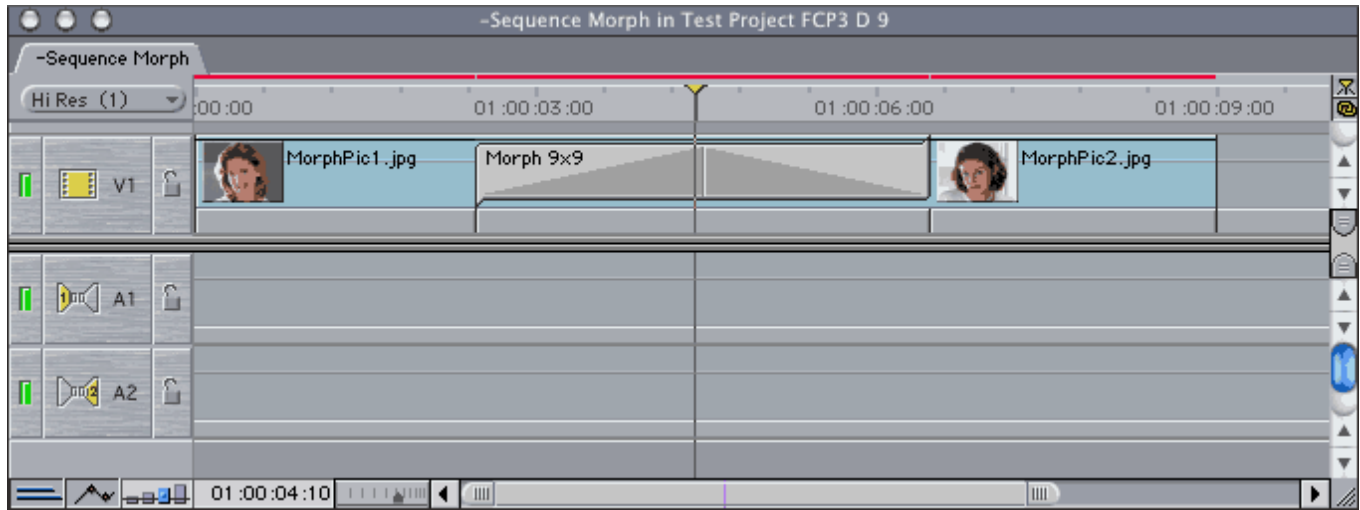
At first we do a simple morph with two still-images using the Morph-transition.

These are the images used for this tutorial:



Drag the two images from your browser onto the timeline leaving no gap between the images. Now you have to apply the Morph-transition. For these images I suggest to use the "Morph 9x9"-transition. Remember: The more points the selected grid has, the better will be the result, but the more work you have to do to set all the points. Open the "Video Transitions"-bin of your Effects-tab and drag the "Morph 9x9"-transition onto the edit-point of the two images.

So far it will look like this:



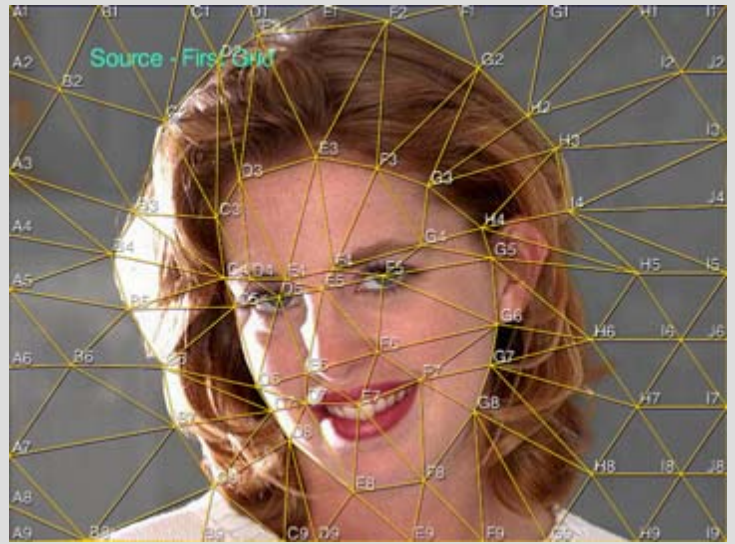
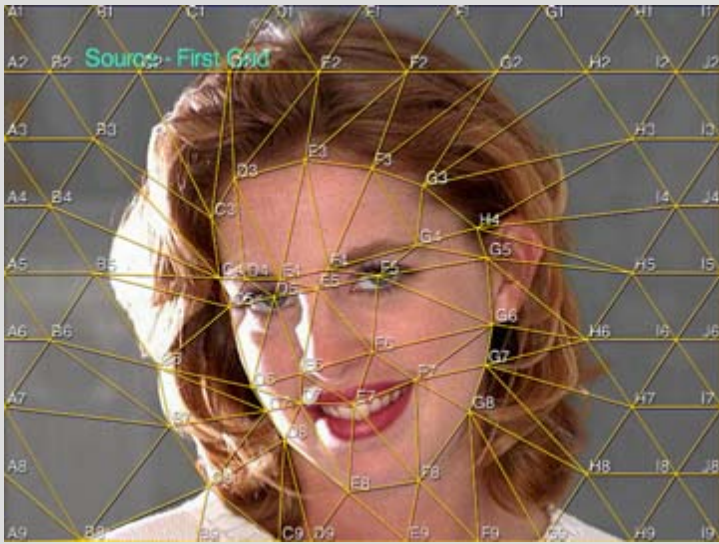
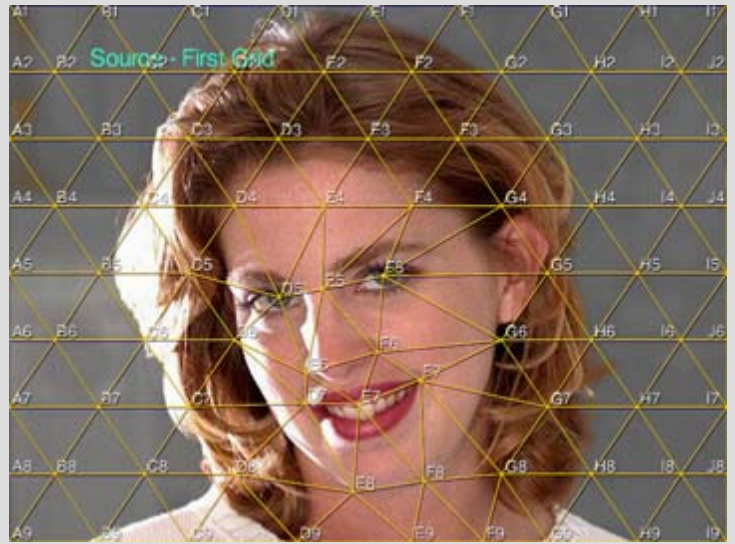
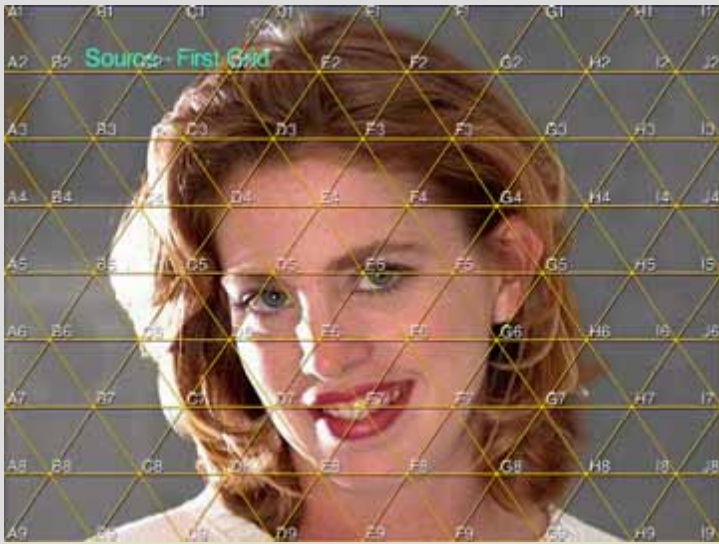
Now double-click the transition. The viewer opens showing the controls for the transition.

With "Canvas Shows:" you can select what you want to see there. All changes to the grid will be made in the viewer. Lets start with the source-image. This is the image on the left in the timeline.

Set your viewer to 100%. Leave all settings like they are and go straight to the "First grid"-controls.

With this example we start with the eyes using the center points of the grid. Then we go in circles out to the border until all points are set.

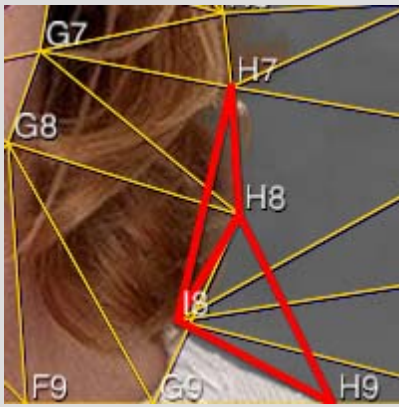
Set the points step by step:



Some important tips:

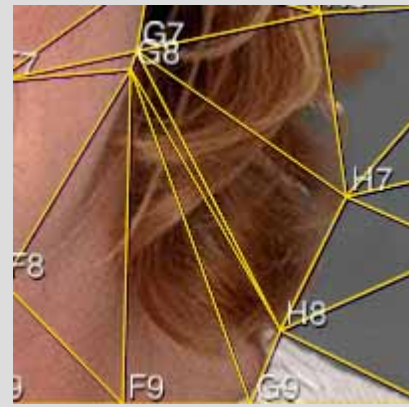
1. Always set the points to striking positions of the image.
2. Use the lines between the points to outline shapes to create better results. If you use D4 for the left eye and E4 for the right eye of a face, you also have to do this with the second grid on the destination image. If you use different points (for example: D4 for the left eye on the source-image and E4 for the left eye on the destination image) for the same content of the image, you will get a really funny, but not good looking result.
3. Do not swap positions of the points. This will cause overlapping areas of the images and will not look good, except you intend to use overlapping areas. Overlapping areas will be outlined in the canvas with a red triangle.
4. Try to avoid acute angles. Its better to use more points on such areas.

Don't create overlapping areas:

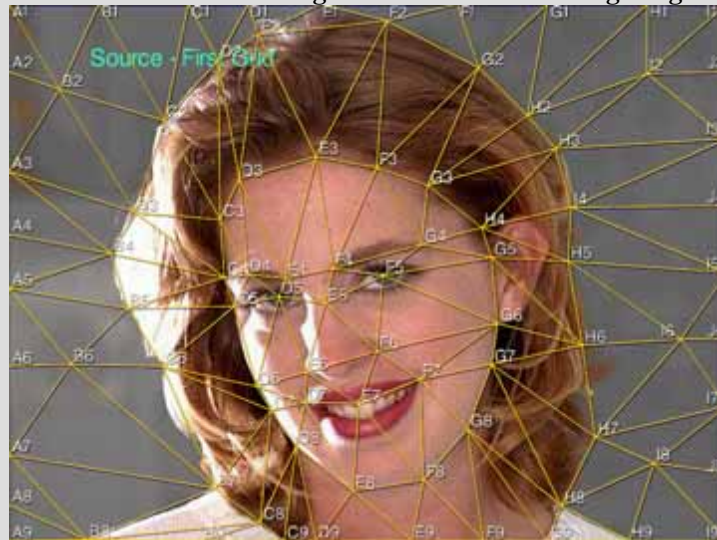


The red triangle shows the overlapping area.

Avoid acute angles:



This is how the source image should look like with a good grid:



After you are done with the source image you have to go to the destination image. Set "Canvas Shows:" to "Destination" and "DV Output shows:" to "Source".

Now "copy" the points of the source image to the destination image. Make sure that you don't miss any points. Not existing striking points within the destination image should be set onto a point somewhere in between the existing points.

This is how the destination image should look like with a good grid:



Now all you have to do is to set "DV Output shows:" to "Morph (Final)", click once on the transition in the timeline and render it (hit Apple-R).

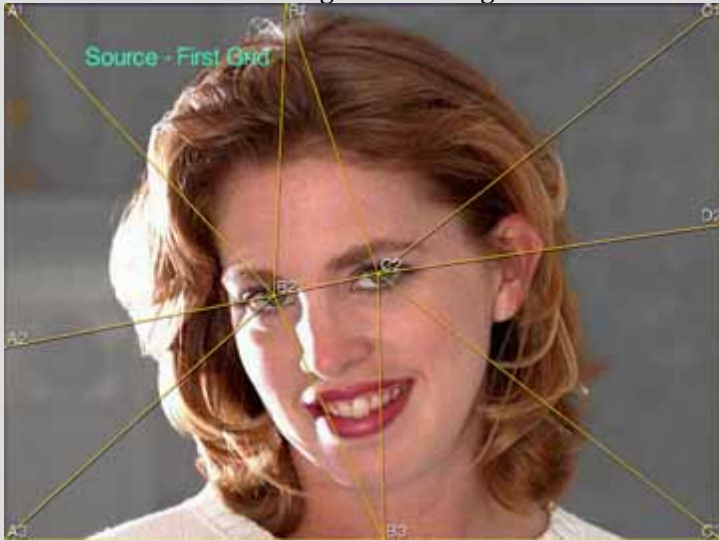
Check the result to see if you have chosen good points for the transition.

Here is the final morph after 50% of its duration:

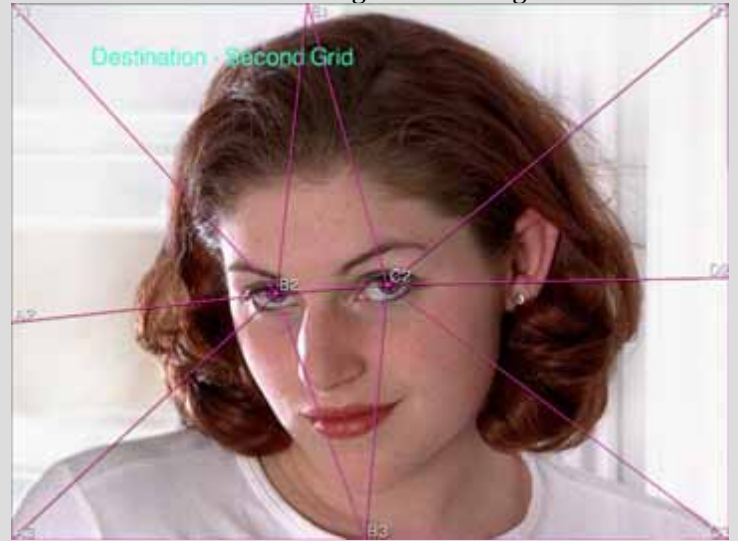


If you want to do a real quick morph with two faces, you can also use a 3x3 grid. Use B2 and C2 for the eyes and move the remaining points on the border to the corresponding angle of each face.

Source-image with a 3x3 grid:



Destination-image with a 3x3 grid:



Very important are the eyes of a face. So make sure that these are marked with a point.

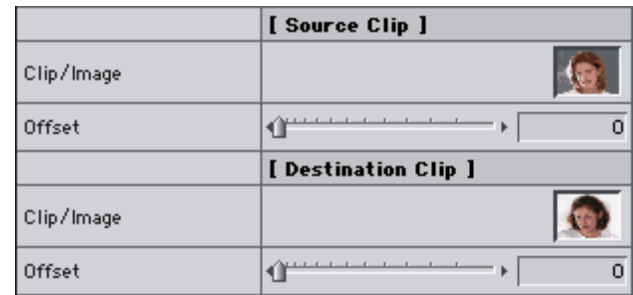
But remember: The more points, the better the result and the more work is to do.

## Do a Morph using two animated clips

If you use animated clips for the morph you should use the Morph-generators. The necessary steps to create a morph with the Morph-generators are very similar to those using the Morph-transitions.

This section only describes the differences.

At first you have to apply a Morph-generator to the timeline. Double-click it and open the controls in the viewer. Now you have to apply the source-clip and the destination-clip to the two image-wells.



The next step is basically described in the still-images section, but there has to be taken care of the moving parts of the video. The Source-grid and the Destination-grid have to follow all striking points. This is done by using keyframes. They have to be set at least at the beginning and at the end of the video in order to make the grid follow their targets well. Then tweak all necessary points in between. It is only necessary to keyframe those points that are off position.

Show Numbers of Row 3	<input checked="" type="checkbox"/>				
Source Grid: A3	<input type="text" value="+"/> <input type="text" value="-360"/> , <input type="text" value="-57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: B3	<input type="text" value="+"/> <input type="text" value="-216"/> , <input type="text" value="-57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: C3	<input type="text" value="+"/> <input type="text" value="-72"/> , <input type="text" value="-57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: D3	<input type="text" value="+"/> <input type="text" value="72"/> , <input type="text" value="-57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: E3	<input type="text" value="+"/> <input type="text" value="216"/> , <input type="text" value="-57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: F3	<input type="text" value="+"/> <input type="text" value="360"/> , <input type="text" value="-57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Show Numbers of Row 4	<input checked="" type="checkbox"/>				
Source Grid: A4	<input type="text" value="+"/> <input type="text" value="-360"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: B4	<input type="text" value="+"/> <input type="text" value="-288"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: C4	<input type="text" value="+"/> <input type="text" value="-144"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: D4	<input type="text" value="+"/> <input type="text" value="0"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: E4	<input type="text" value="+"/> <input type="text" value="144"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: F4	<input type="text" value="+"/> <input type="text" value="288"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		
Source Grid: G4	<input type="text" value="+"/> <input type="text" value="360"/> , <input type="text" value="57.6"/>	<input type="text" value="◀"/> <input type="text" value="◇"/> <input type="text" value="▶"/>	<input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/> <input type="text" value="◆"/>		

(Example)

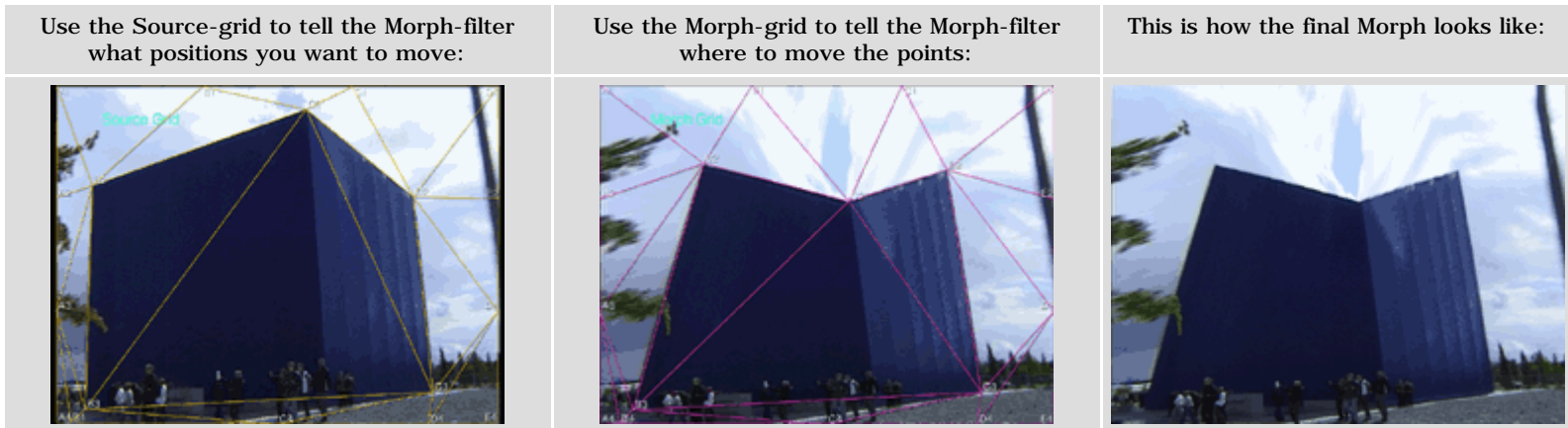
At last the Morph-generator has to be rendered. Set "DV Output shows:" to "Morph (Final)", click once on the generator in the timeline and render it (hit Apple-R).

## The Morph-filter. What is it for ?

The Morph-filter can be used to create a specific distortion on video-clips.

The procedure is very much the same compared to the Morph-generators and the Morph-transitions. The difference is that there is only a Source-clip and no Destination-clip. The Source-clip itself is the destination.

To create a distortion two grids have to be set onto the desired area. If the Source-grid and the Morph-grid have the same shape, the clip will not be distorted. If a point of the Morph-grid is on a different location compared to the Source-grid, the content of the clip will be moved to the new positions defined by the points of the Morph-grid.



All points can be keyframed, making it possible to follow the moving parts of a video-clip.