Morph Age 4.0

User Guide

May 2008

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1. Welcome to Morph Age

Morph Age is a Mac OS X application for warping and morphing images, such as faces, and saving the result as a still image or as a QuickTime movie.

This tutorial covers both Morph Age and Morph Age Pro. The main difference between the regular and the professional version is that you can import movies in the pro version. A *"Pro Only"* label is used wherever appropriate in the text.

What You Will Learn

After reading this tutorial, you'll be able to:
- warp a still image to create another still image or an animation.
- morph two still images together to create a static morph or even a morphing animation effect.
- use QuickTime movies as inputs to both warping and morphing effects.

Pro Only: import QuickTime movies.

Remark

In this tutorial, you need to choose menu commands, which look like this:

Choose Morph Age > Register.

The first term after Choose is the name of a menu in the Morph Age menu bar at the top of your computer screen. The next one is the item you choose from that menu.

2. Installing Morph Age

Downloading Morph Age

Morph Age is provided as a disk image that you can download from our website (http://www.creaceed.com). Once downloaded, double-click it to make it appear on your Desktop. Inside the disk image, you will see the Morph Age application, with the following icon:

Registering

When you buy Morph Age, you receive a license key to fully enable the application.

To register, open Morph Age, and choose Morph Age < Register. The registration panel appears. There you can enter the Key code we sent you.
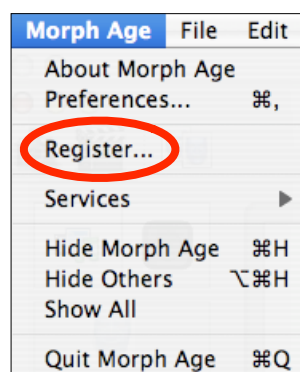
You are now ready to use Morph Age.

3. Getting Started

This part of the tutorial will learn you step by step how to use Morph Age. The first section deals with morphing concepts. Afterwards you will learn how to warp an image, and how to morph an image into another one.

What is Warping and Morphing?

Morphing and Warping concepts are used extensively in this tutorial. Having a good understanding of these will allow you to use Morph Age at its best.

Warping

Warping is the process of deforming an image by a set of constraints. Morph Age uses Bézier splines to define that deformation. More accurately, 2 sets of corresponding Bézier curves are created on the image, the source and destination sets. You can imagine the curves on the image as metal wires over a rubber sheet. The relative position of the curves in these 2 sets is used to derive the image transformation. Moving some of these curves warps, or deforms the underlying image.

Morphing

Morphing is the process of continuously transforming an image into another one both in terms of colors and shape.

When you morph an image, you smoothly go from image A to image B in 2 steps:
1. you warp image A and image B to intermediary images A' and B'
2. you blend these intermediary images into a single final image.

How to Warp an Image

1. Open Morph Age by double-clicking its icon in the Finder.
2. A welcome window appears with a number of options.

3. Keep the default options and click Enter. Morph Age automatically creates a new document.


4. Select an image or picture to warp. Morph Age supports most image formats, and iPhoto is surely a good source of such pictures. Note that you may need to crop or resize down pictures depending on your camera resolution and computer configuration.

5. Drag and drop the picture of your choice into one of the 2 left panes (either one). The image appears in the 3 panes:

6. Define curves on the left pane that you will use as a reference. Next, these curves will be modified on the right pane, implying the corresponding deformation to the image.

7. Select the Circle tool ⬭ , and, in the left pane, click and drag a circle that covers the entire face. If you are not satisfied with the circle, you can undo that command through the Edit menu, or ⌘Z.

8. Make 3 additional circles, one for each eye and one for the mouth. The curves should never cross each other. Notice that the shapes are drawn in the right pane simultaneously. You should come up with something like this:

9. Now you can move the curves in the *right pane*. Choose the Select/Move tool
   ![cursor]. In the right pane, click and drag the curve on the mouth upwards. The image
   is immediately deformed, reflecting the curve movement.
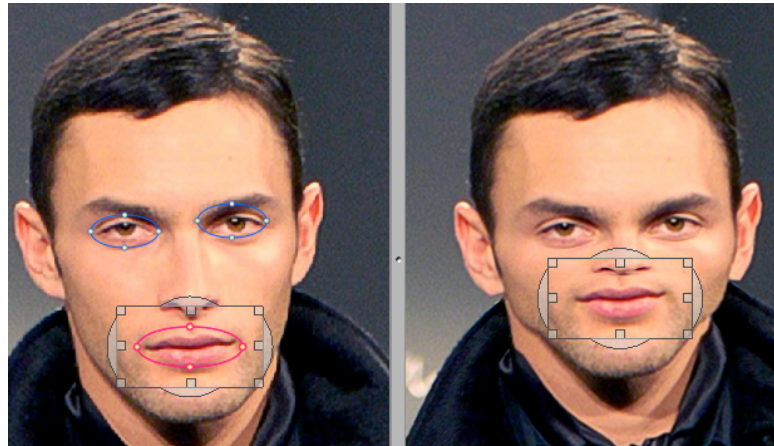
10. Eventually, you can render this as a QuickTime movie. Click Render Movie ![icon]
    in the toolbar. Default parameters are OK, just click Render and in a few seconds,
    the rendered movie automatically opens in QuickTime Player.


You will find additional examples in the Help menu > Examples.

How to Morph an Image into Another One

It involves a slightly different process.

1. You need 2 images (either your own or the provided Picture A and Picture B in
   the Examples folder).
2. Open Morph Age and drag and drop the first image on one of the panes.
3. Repeat the process for the second image. If the images don't have the same size,
   Morph Age asks you whether you want to resize the second image. If this is the
   case, click Crop. The viewing area should look like this.
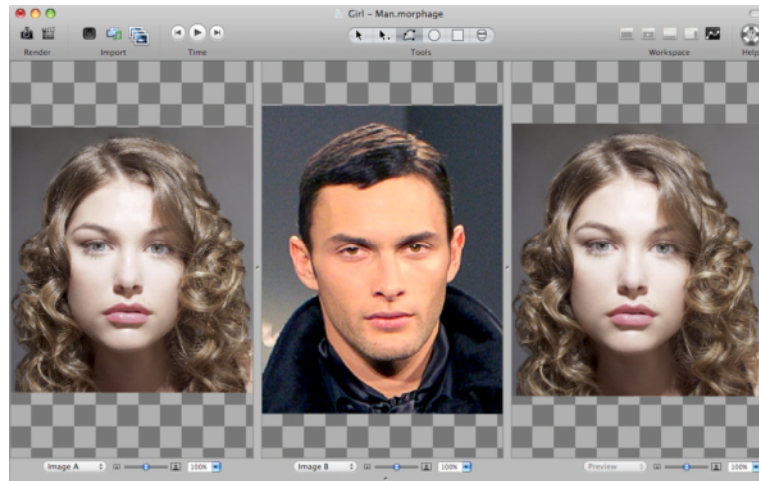
4. To prepare the morph operation, create curves for the same features on both images. That means that if you create a curve around the eye on the first image, you have to adjust that same curve so that it fits the eye in the same way on the second image.

For this purpose, choose the Bézier Curve tool and, in the left pane, click, hold and drag points around the face. To close the current curve, you can either click the first point, or double-click (i.e. open a new curve).

5. Repeat the process for the eyes, the nose, and the mouth. It should look like this.
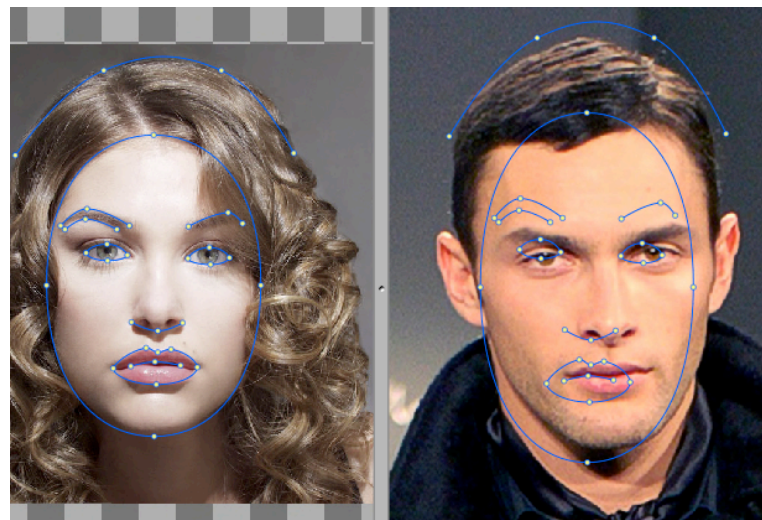
Use the zoom if you want to be more accurate. Remember, if you are not satisfied with a curve, you can undo or delete (backspace key) it. Notice that the curves also appear in the center pane.

6. Pick the Select/Move tool and update the curves on the right pane so that they match the features of the face.
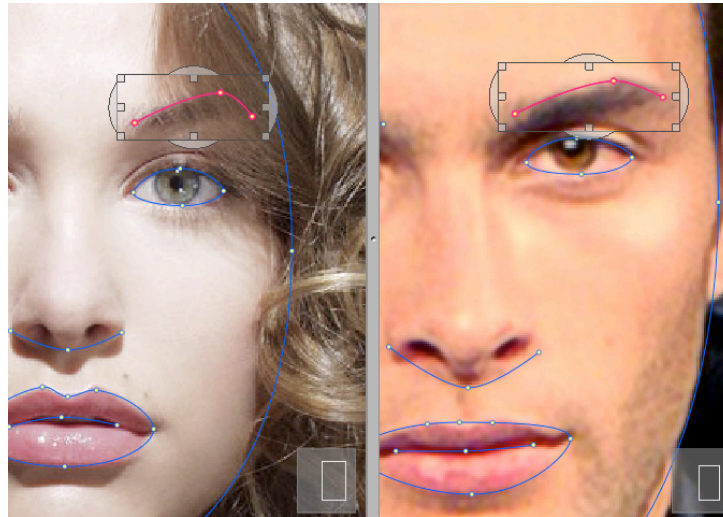
7. Now that you are done with curve setup, preview the animation. Open the Interactive Preview panel by clicking the play button in the toolbar. You can watch the result in real time in the preview panel on the right side of the project window.
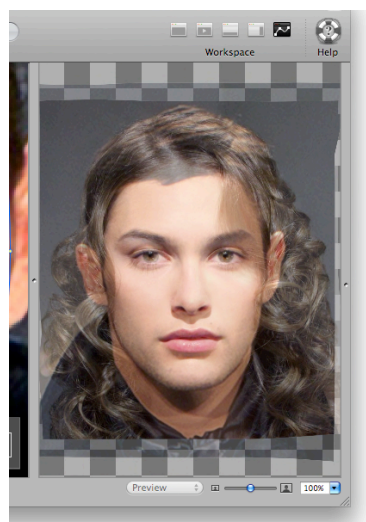
8. You can render this as a QuickTime movie. Click Render Movie button and then Render button. The rendered movie automatically opens in a few seconds.
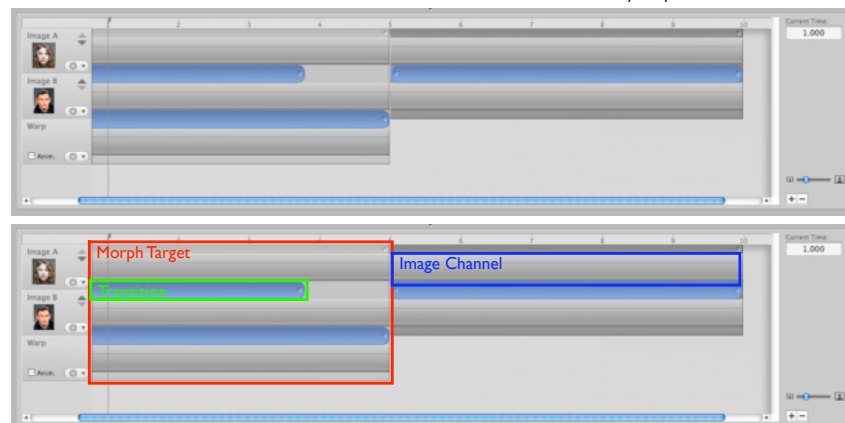
4. Getting Accustomed

This chapter deals with basic techniques. You will learn how to manage documents and how to use most tools.

Morph Age Documents

Creating a New Document

When you open Morph Age, the application creates a new, empty document for you. You can create additional documents by choosing File < New command or ⌘N.

Saving and Opening Documents

Saving your documents often is always a good idea if you want to reuse them afterwards without losing all the changes you've made.

Simply save your document by choosing File < Save (or Save As...) or ⌘S. Morph Age will ask you a file name and location the first time you save the document.

You can open a previously saved document by choosing File < Open.

Document Details

Morph Age documents store images internally. That means that once a document has been saved, it does not rely anymore on the images you dragged in.

Pro Only

However, QuickTime movies you use as input are not copied to the document (as they can be a few hundreds Megabytes or even more). The movie location on the disk (or its path) is stored instead. That means that if you move either the document or the movie, Morph Age will request you to locate the movie manually.

Importing Images and Movies into Morph Age

Importing images is the first step in building a morphing animation. With Morph Age Pro you can also use movies as input files. This can be done from various sources, including files, iPhoto and iMovie libraries, and the iSight camera.

Morph Age supports images of up to a few mega pixels, depending on your computer configuration.

Importing From Files

To import images from files, the following options are available:

- Drag & Drop the file to one of the editing pane or the image list (image pane),
- Choose the Target menu, Add Image or Add Movie item,
- Click under the image list.

Most image formats are supported, including TIFF, PNG, JPG, PDF as well as usual movie formats, QuickTime, regular AVI, MPEG1-2-4.

Importing From iLife Library

You can also import media directly from iMovie or iPhoto libraries. You can access the iLife media browser by clicking this button . The media browser appears, and you simply drag & drop any image or movie into Morph Age.
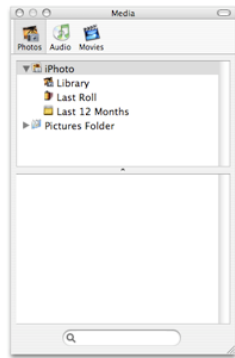
Importing From iSight Camera

If your Mac has an iSight camera, you can use it to create either a still image or a movie and import it into Morph Age. Click the iSight button in the image pane. The Camera Capture panel appears:

In this panel, you can choose where to save the recorded picture or movie on your disk, as well as the codec used for recording the QuickTime movie.

Once the picture or movie is recorded, click OK. Morph Age will then ask you whether to add the recorded file to the document. Click Yes to proceed.

Managing Images

Adding the first image of the first morph target (see "Morph Targets and Channels" on page 13) also sets the rendering size of the document. You can change it later in the Info pane, Document section:

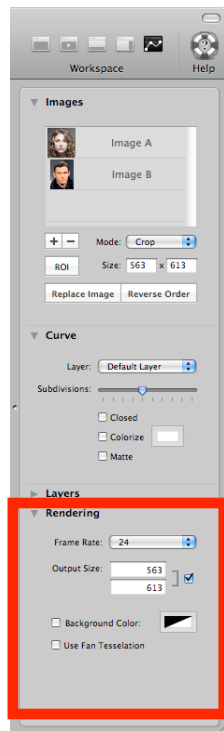Images that you add afterwards should have the same size as the rendering size. If this is not the case, Morph Age will ask you to Distort, Crop or Extend the newly added image. These operations are illustrated here:
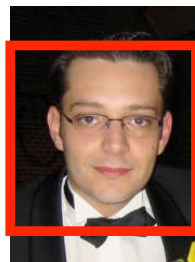
| Crop | Extend | Distort |

Distorting will make the image appear flattened or elongated. Cropping and extendig on the other hand keep the aspect ratio: the former removes some border of the image, the latter adds a border around the image (whose color is set with the document background color).

Moreover, Morph Age 4.0 introduces a new concept: the Region of Interest (ROI).

Simply click the ROI button in the Info pane, Images section, and you can morph and warp only a subregion of an image, as illustrated here:
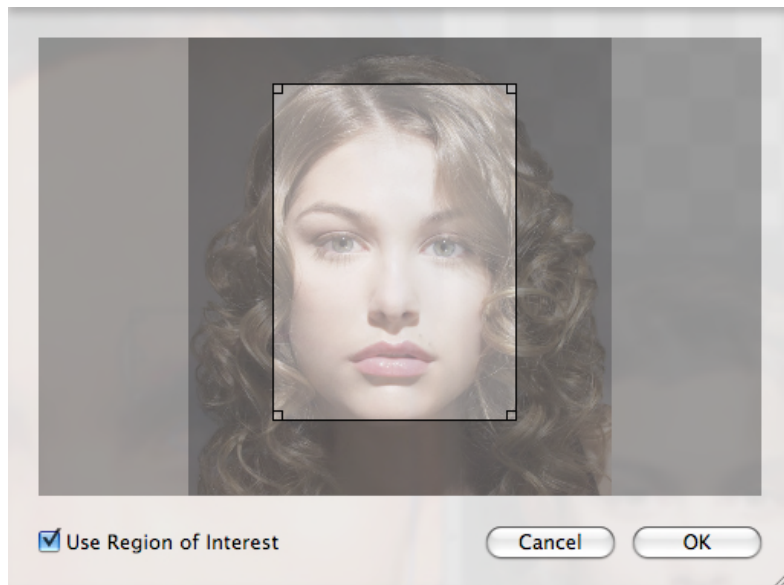
Morph Targets and Channels

A document is made of one or several morph targets. Morph targets, in turn, may contain one or several images which respectively correspond to warping and morphing cases. The concept of image is expressed as channels in Morph Age, which is more general.

This is illustrated from the timeline view, which you access by clicking this button:

Morph Targets

When you open Morph Age, the application automatically creates a morph target for you. A morph target keeps all the information that is necessary for a warp/morph operation: the image or images (depending if you want to perform warping or morphing), the curves and their correspondence in various images, and the layers associated with those curves.

You see morph targets in the lower pane, as shown on the figure below. A morph target contains a number of channels (image, movie, warp) and their associated transitions (morph or warp) as illustrated below. They can be individually adjusted.
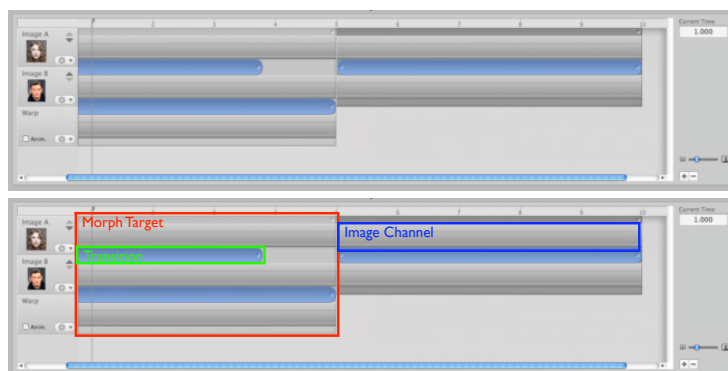
Setting Transition Duration

Duration of a morph target, as well as the duration of the transitions it contains, is an important parameter. You know how long the transformation (morph or warp) lasts. You can set it with the mouse by dragging the extremity of the target or transition in the timeline view. This is illustrated in here:
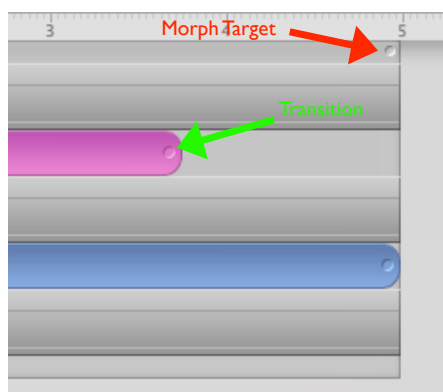
Add Morph Targets

Using more than one target may be useful if you want to perform 2 morph operations that are not bound to the same curves. Imagine morphing a human face to a cat face, then the same cat face to a car (OK, this is weird). For the first morph, you need curves that match the eyes, nose, mouth and entire face. For the second one, you only need the eyes (headlight) and entire face (car silhouette) and not the nose and mouth. To do this you have to create a second morph target, with the cat being both the second image of the first target and the first image of the second target.

You add a morph target by clicking ⊞, to the right of the timeline (you remove by clicking ⊟).

Morphing more than 2 images

Morphing an image into another, into another, etc. is also possible with Morph Age. For this, you just have to add (drag and drop, or *Target > Add Image*) all the images to the same morph target and edit the corresponding curves for every image.

When you morph more than 2 images, let's say A>B then B>C, you must provide the corresponding transition durations. You set that information in the timeline view, by resizing the transitions. In this example, transition A>B is set to 2 seconds, while B>C is set to 3 seconds for a total of 5 seconds (morph target duration).
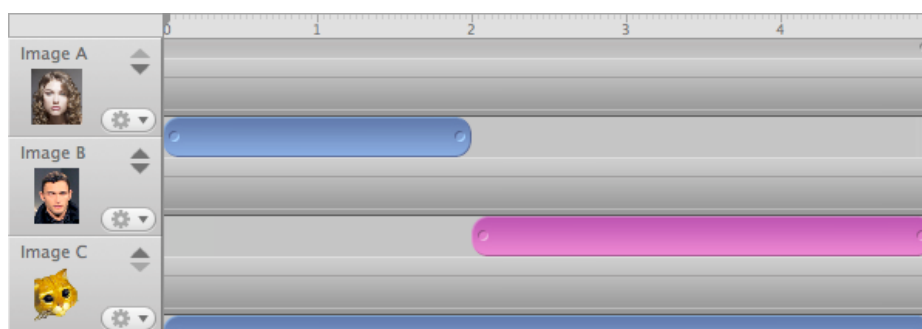
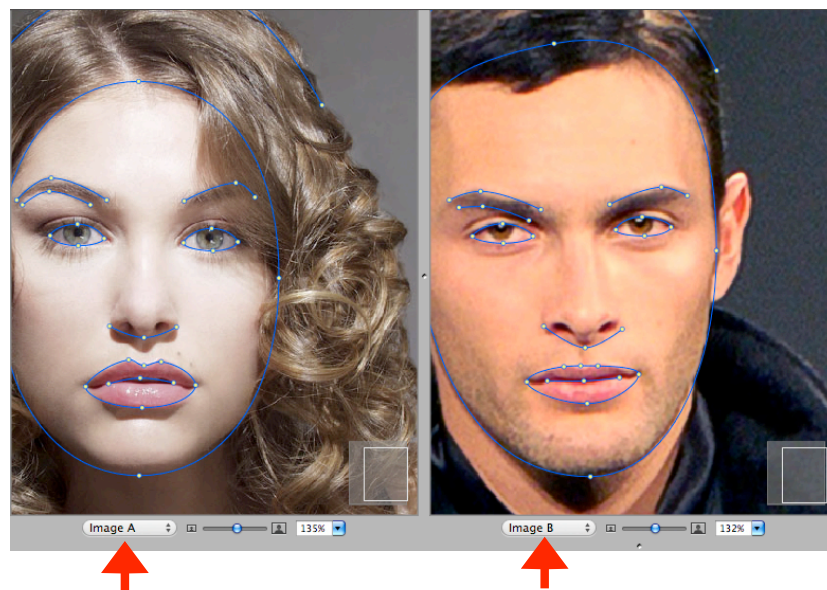## Regular Channels

Channels are the way you access images in the left, center, and right panes. Special channels which are not related to images (i.e. warp and preview), are also available and are discussed in the next sections on this page.

Channels are also shown in the timeline view, with their corresponding image stamp (except the warp channel, which has no associated image).

Each time you add a picture to a target, Morph Age creates a set of curves for it which are made accessible through the corresponding channel. Regular channels (those related to images) have standard names such as Image A, B, C, etc. or Movie A, B, C (*Pro Only*), etc. They are displayed either in the left or the right pane, by selecting them from the corresponding pop-up. Once you have selected a channel in an editor pane, you can start adding or editing its associated curves.

The Warp Channel

The warp channel is a special channel used to define deformations. Like any regular channel, the warp channel is associated to a set of curves. But unlike regular channels, it has no associated images.

For more information about its use, see chapter 5.

The Preview Channel

The preview channel renders a live preview of your project. It is always accessible in the right pane.

Use it to get an idea of how the final image or movie will look like. Select it from the channel pop-up (either left or right), and move the time marker (or click the Play button). The result will appear.

Curves and Shapes

Curves, also referred to as shapes, are used throughout Morph Age for specifying transformations. Morph Age uses Bézier curves, from the name of their inventor. These are easily created and modified and are used in many graphic solutions.

Tools for Creating Curves

In Morph Age, you create curves with the following tools:
- Bézier Curve tool
- Circle tool
- Square tool
- Face tool.

Whichever the tool you use to create a curve, you can always edit it point by point.

Bézier Curve Tool

You create curves by clicking in one of the 2 panes, each time adding a point at the clicked point. When holding the mouse button, you can move the handles of the just added point, and fine-tune the curvature.

Bézier curve may be open or closed. To close an added curve, click the first point. You can do the same from the Info pane, Closed check-box.

Circle Tool

With the circle tool you can create circle-shaped Bézier curves. These are regular Bézier curves so that they can be edited as usual.

Square Tool

With the square tool you can create square-shaped Bézier curves. These are regular Bézier curves so that they can be edited as usual.

Moving and Deforming Curves

Select / Move Tool

With the select and move tool you can move entire curves as well as individual points.
- To move an entire curve, click and drag the mouse from the line (i.e. not one of its points).
- To move a point, click and drag that point.
- To move a point handle (tangential segment), you first have to select a point (its handles appear), and click and drag one of its handles.

Note that handles may be moved individually by holding the ⌘ key while dragging.

You can move curves and points simultaneously in another channel by holding the ⌥ key.

Rotating and Resizing

You can rotate and resize a curve with the select and move tool, using the selection frame:
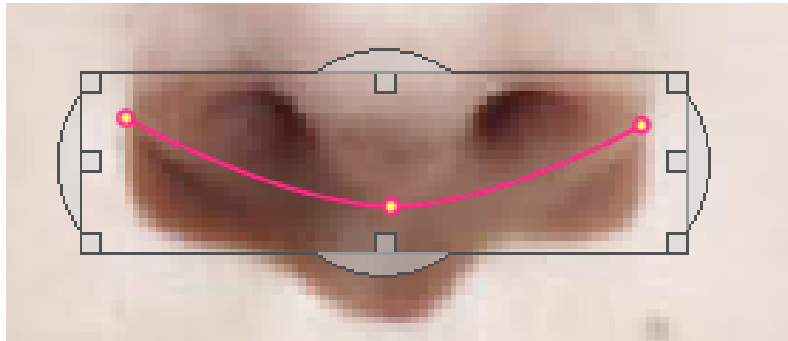

The square handles make resizing possible, while the arc-shaped handles enable you to rotate the selected curve(s).

Insert Point Tool

You can insert a point in a curve using this tool. Simply click the curve where you want to add a point.

Restoring a curve across channels

Sometimes, it is interesting to restore the curves from one channel to another. When? For example for a multiple morph between A, B, and C, with C being the same image as A. This is achieved from the channel menu, Copy From item (choosing the appropriate source):
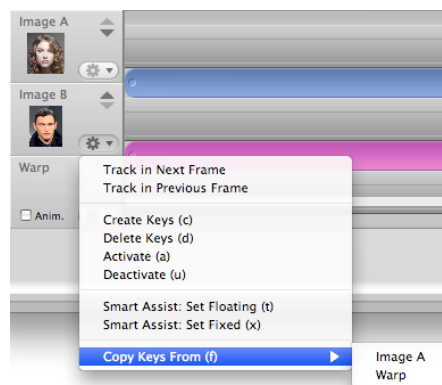
Curve Properties

Curves have other properties: whether they are closed, their sampling resolution and their associated color. They also have an associated layer (see in chapter 5).

Closed State

This means you can alter whether a curve is closed or not.

Sampling Resolution

With the sampling resolution you can choose how precise the curve should be approximated. Higher resolution means that the transformation will follow the curve more precisely at the cost of increased rendering time. Default value should be enough in most cases.

Colorizing a curve

Default curves have no associated color. When enabling that option from the Info pane, Curve tab, and choosing the color, you can achieve some colorization effects. You can use it for Hulk-like morph effects. See the Hulk Warp example.

Note that curve color is limited to surrounding curves and in that context, barrier usage also applies to it.
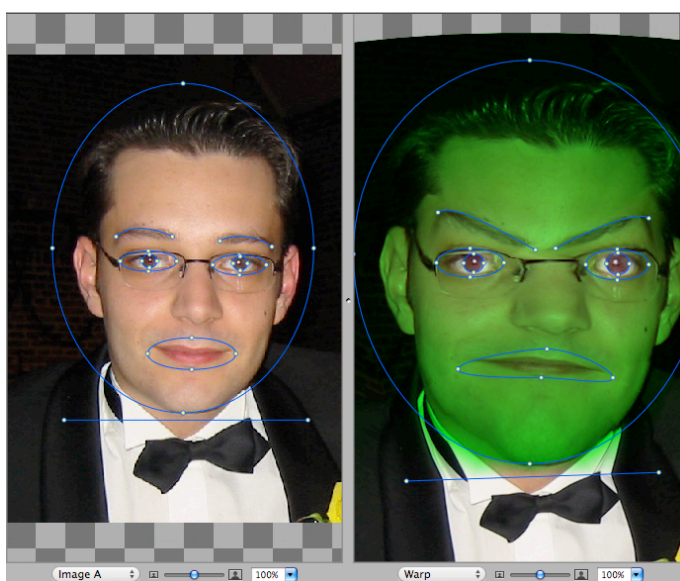

Working with Time

Working with time is an important feature of Morph Age. Indeed, as you can use QuickTime movies as input (*Pro Only*), curves should be able to follow image motion. Moreover, even when working on still images, you may want to have a deformation that animated over time.

To handle this, Morph Age uses keyframed animation for curves. That means that curves can move, according to the location of their control points at specific times. A keyframe is a point position for a given time.

When creating curves, a keyframe for each of their points is set at time 0 (relatively to the start time of the target). When modifying existing points, keyframes are automatically created at the current editing time.

You can tell that a point has a keyframe at the current editing time because it has a clear interior. In contrast, it is in plain color when there is no keyframe, as illustrated:

Not a Keyframe   Keyframe
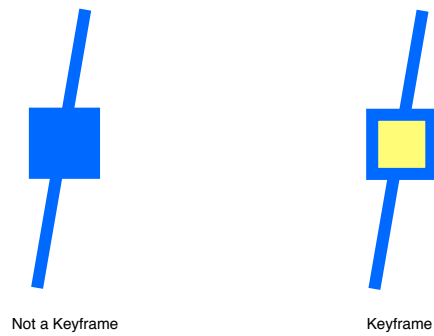
The positions of control points between keyframe times are interpolations of their surrounding keyframes.

The timeline also shows keyframes times, as illustrated below. A colored rectangle shows the existence of a keyframe at that specific time. Pink color is used for selected curves keyframes while blue color is used for all curves.
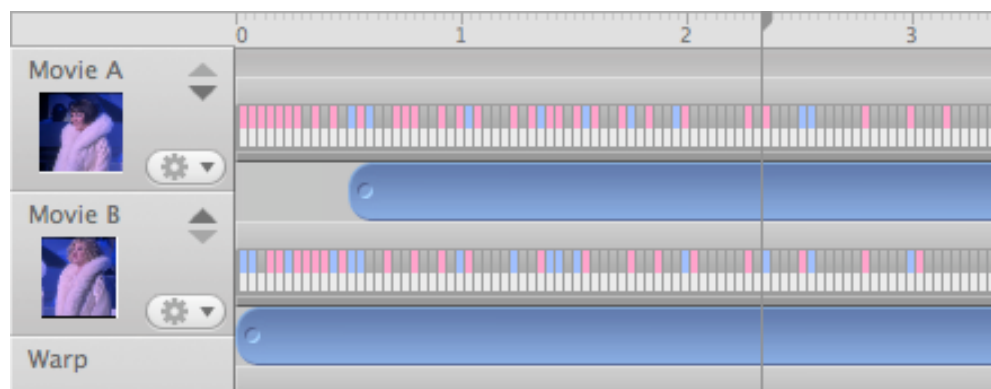
Setting / Copying Keyframes

Setting keyframe is done by editing a curve at any time in an editor pane. You can copy a keyframe from another channel by using the channel menu, as illustrated here:
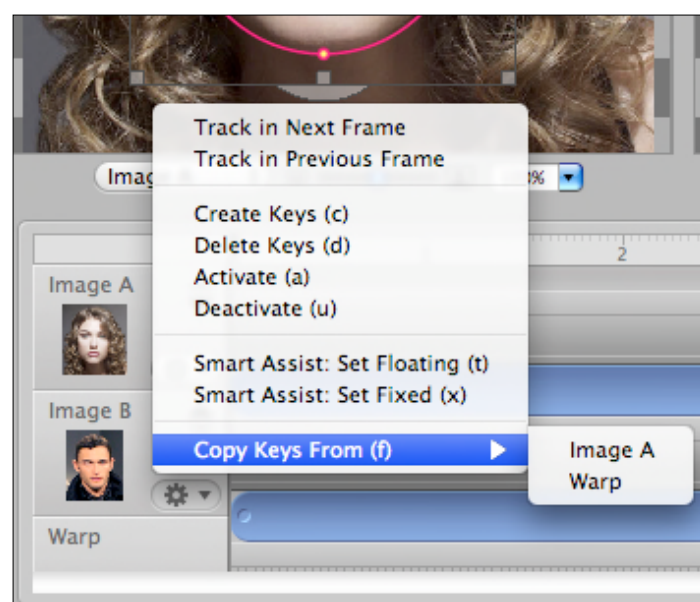
Other options are also provided in this menu. They are applied to selected curves in the current time selection.

When working with the Warp channel as described in chapter 5, it is sometimes useful to create a keyframe in the warp channel at the exact location of the curve in the morph transition. The Warp channel menu has the *Set from Morph Result* option specifically for doing this.

Navigating between Keyframes

Sometimes, you may want to go to a specific keyframe without finding out manually at what time it is. You move from one keyframe to the next (or previous) one by choosing *Navigation > Next Keyframe* item (respectively *Previous Keyframe*). This will automatically bring you to the exact time of the surrounding keyframe.

Removing Keyframes

To remove a keyframe, select its curve and set the editing time. Then go to the channel menu and choose Delete Key.

Activating / Deactivating Curves

At some time during the effect, you may want to make a curve inactive. As a consequence, the curve will not be used at that particular moment to compute the warp or morph effect. This is particularly useful when working with movies because one of a face features disappears for instance (occluded eye for a small duration).

How to deactivate a curve?
1. Select the curve itself.
2. Highlight the time period as depicted here.
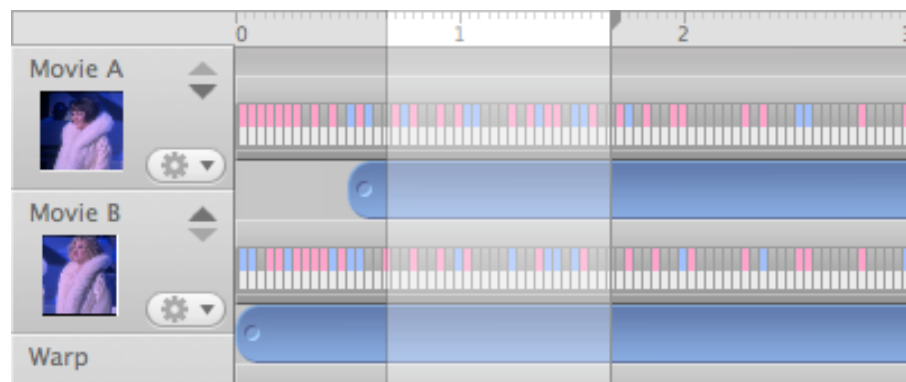
3. Choose the *Deactivate* option.
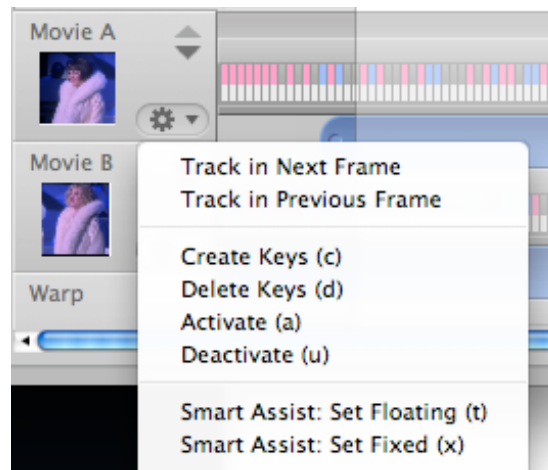
You'll notice that the active status disappeared in the timeline and that curve is no longer used in that time period for morphing and warping effects.
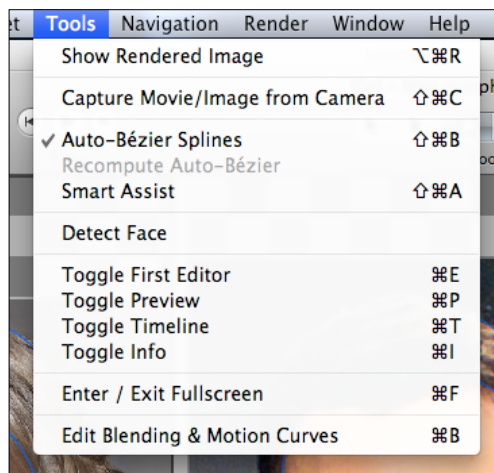

Using Smart Assist™

Smart Assist is a new feature of Morph Age 4.0. It helps the user to locate the curves of one image to another one, or for movies.

Its principle is simple: say you are ready with the curves (eyes, mouth, face) for image A and you want now to locate them on image B. With Smart Assist turned on, simply moving the left eye on image B will move all other curves as well in the same way. When moving the right eye, this will move all other curves except the left one (already positioned). By the time you move the last curves, you will notice they are almost at the right place already and just minor adjustments are needed.

You can enable Smart Assist by choosing Tools < Smart Assist, or alternatively Command-Shift-A.

Once Smart Assist is enabled, you will notice that some curves appear as dashed, which means that they will move along while other curves are moved.
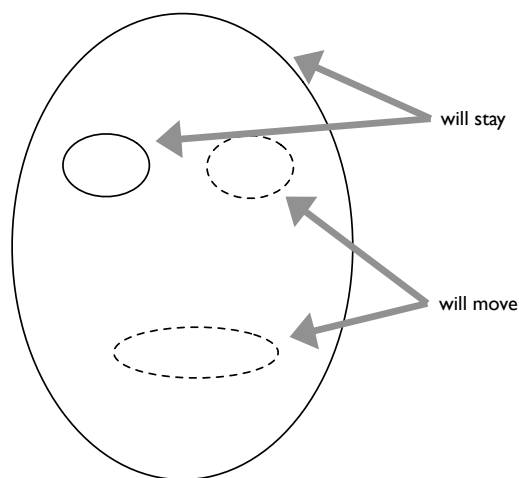
You can further change the state of a curve to fixed or floating by first selecting it with the mouse and then by using the appropriate option in the channel menu (or respectively pressing x or t).
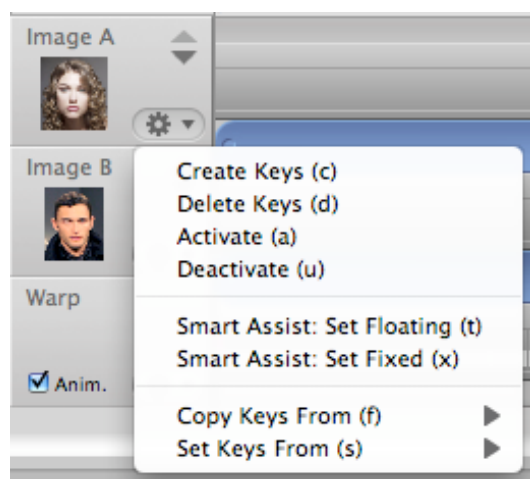
5. Getting Advanced

Morph Age has a few advanced features that make interesting special effect possible.

Blending and Motion Curves

Morph Age performs a linear animation in morphing and warping effects, meaning the image is transformed at a constant and steady pace.

You can change this default linear motion for something more creative by editing blending and motion curves (not to be mistaken with the curves in images). You can open the Blending and Motion Curves window by clicking this button in the toolbar: .
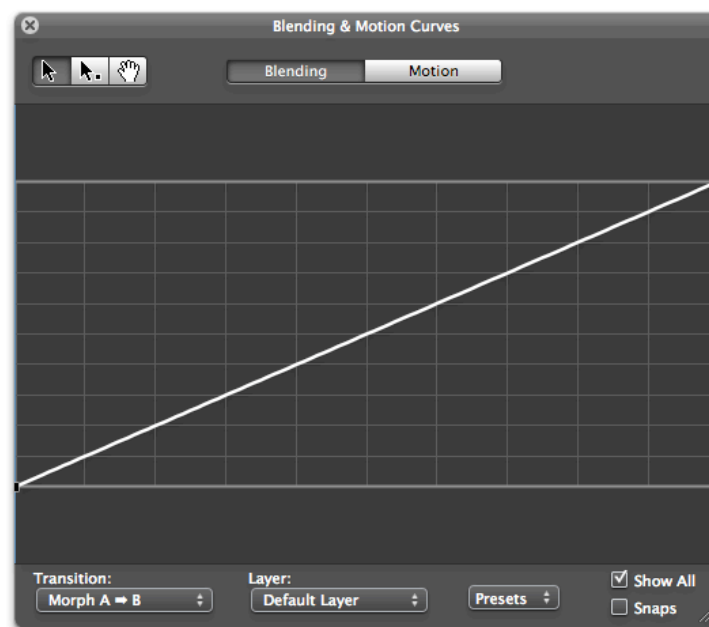
The Blending and Motion Curves are displayed by choosing the appropriate button at the top of the window.

Blending

On the picture above, the Blending curve is displayed and it shows that the blending, or color mixing, between image A and image B happens in a linear way. This curve can be altered so that it stays with the texture of image A for some time before going rapidly to the colors of image B and stay there for the remaining of the animation, as illustrated on the next page.
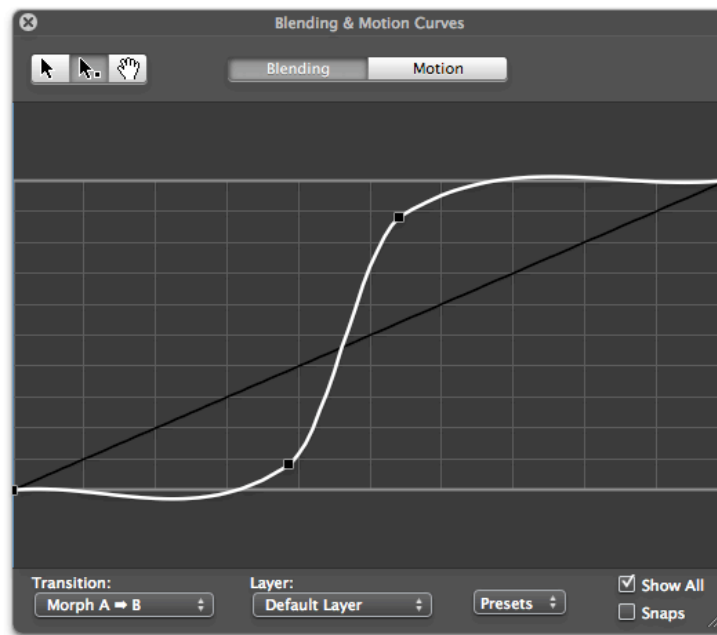
To have a better understanding of this, you can play the preview while you edit the curve.

Motion

Similarly, the motion, that is, the deformation in a warp operation or the displacement in a morph operation can be controlled over time. Select the Motion button in the top part of the window and choose the Overshoot preset (Presets button).
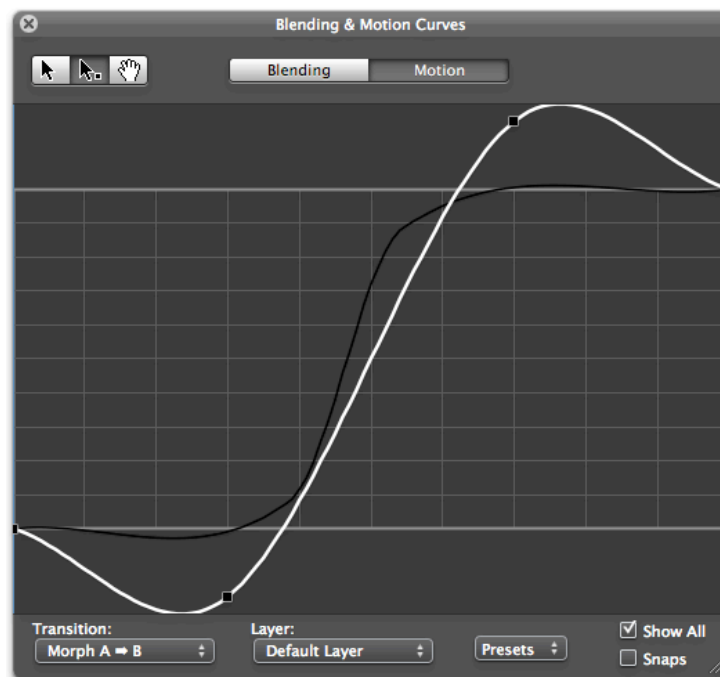
The overshoot means the transformation will first contract (first half of transition) then rapidly expand beyond the target position to finally converge.

Note that motion editing applies to a given layer (see "Using Layers" below), while blending applies to the entire transition.

Using Barriers

Sometimes, you want to prevent some part of the image from being affected by the deformation. This can be achieved by surrounding those areas with curves or barriers. To better illustrate this, consider the following image and let's say you don't want the mouth to move while deforming the eyes. Adding a simple Bézier curve just above the mouth will prevent it from being deformed.

Another similar rule is that parts of images inside a closed curve won't be affected by deformations of other curves.

Using Layers

Curve layers are used for 2 reasons:
• taking depth into account
• using different motion curves.

Curve Depth

Thanks to curve layers Morph Age knows which parts of the image are above other parts and that it should take that into account for the deformation.

For example, you may want to make the nose grow downwards, but it should not deform the mouth (just pass over it instead). Or, make a bigger chin but without affecting clothes under it.

You can achieve that kind of effect by using layers. For instance, let's say you want to grow the chin so that it passes over the clothes.
1. Create a Bézier curve for the chin.
2. Create another Bézier curve, just below, that will act as a barrier. It should look like this:

3. Select the chin curve and go to the Info pane.
4. Open the Layer section. You see the layer options.
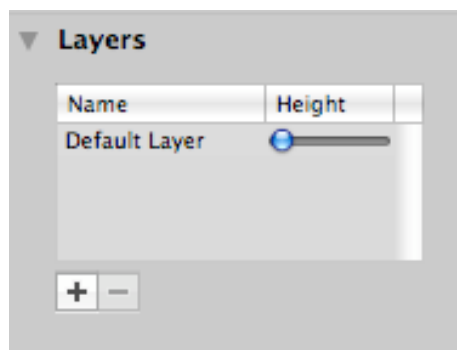
5. Click ⊞ to create a new layer. You can change its name to "Face Layer" by double-clicking it.
6. Set the layer height to some greater value using the slider. Layer height determines the height of the objects in the image.
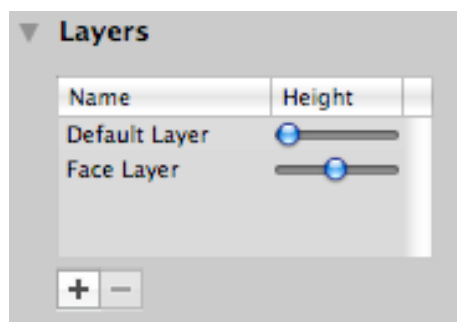
7. Still in the Info pane, select the Curve tab, and change the layer of the selected curve to the newly created layer, Face Layer:
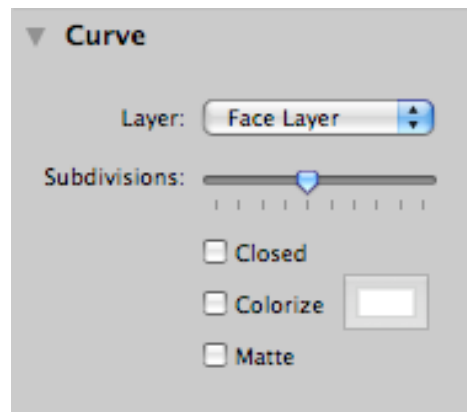
8. In the right pane, you can freely move points of the chin curve downwards, over the clothes. You can hold the crtl key while moving points or curve as it temporarily hides the curves to better see the image.
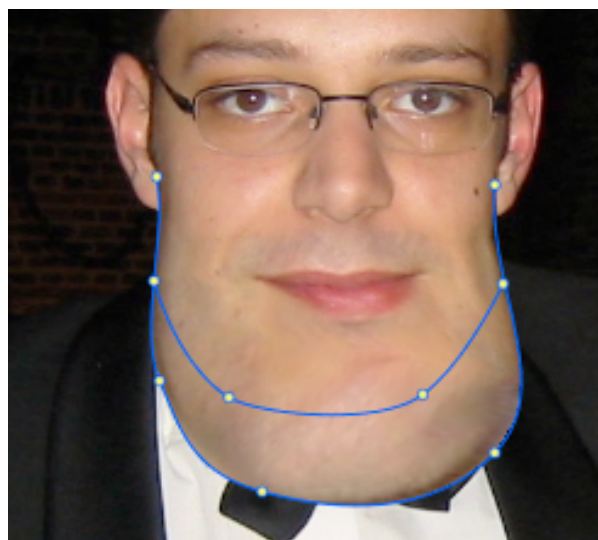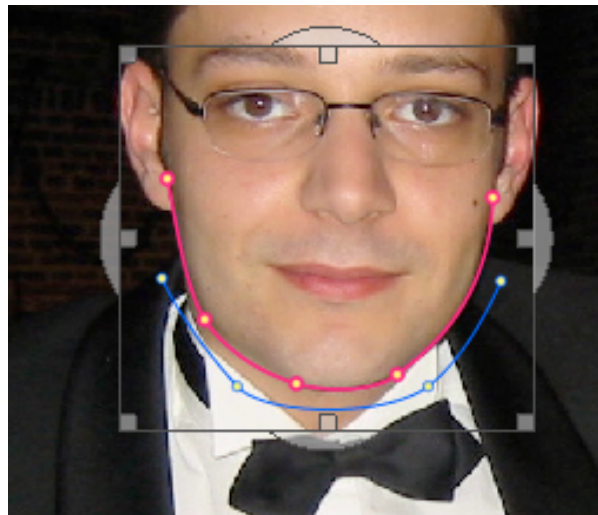
You can use multiple layers in the same way. The only important thing is their relative height.

Curve Motion

The other reason for using layers is that you can specify different motion behavior to individual layers. For instance you can make the eyes move simultaneously but before the mouth and the nose if you use 2 different layers (as explained in the Blending and Motion Curves Section on page 23).

Using Transparent Images

Morph Age fully supports transparent images (or images with an Alpha channel). They are properly composed with other images in morph renderings. The only thing to take into account is that the background color is used to fill transparent areas. It can be changed from the Info pane, Other tab.

If you want to warp a transparent image and keep its transparency in the output, you just have to use a background color with a zero opacity (go to the color panel). The Alpha channel of the image will be warped in the same way as the image.
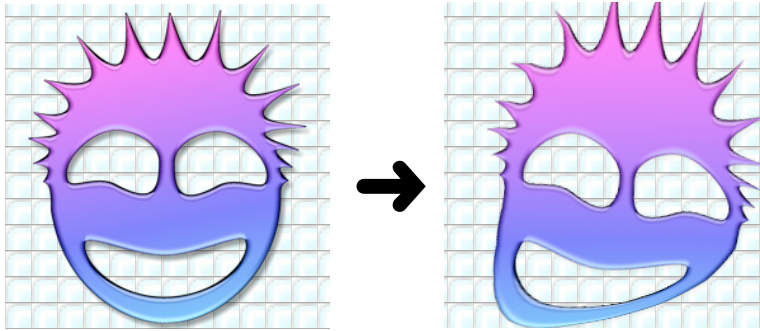
To preserve the alpha channel in the rendered movie (to further compose it in an external program), make sure to use an appropriate codec, which supports transparency. This is achieved by choosing Million of Colors+ depth from the codec pane in the QuickTime Settings Panel (not all codecs support that depth parameter).
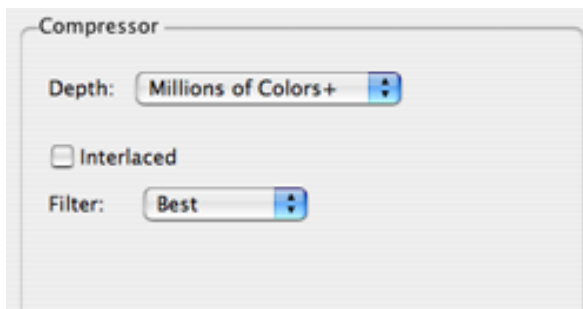
Using the Warp Channel in Morphs

When you morph an image into another, you typically define curves on the starting image as well as on the ending one. Morph Age then derives curves related to a mix of those 2 sets of curves and performs a warp from the starting image to that new set of curves, the same for the ending image and blends the 2 images.

When using the warp channel in a morph operation, you ask Morph Age to further mix the resulting curves of morphing with the set of curves of the warp channel, which can be animated by keyframing. This means you can achieve interesting effects such as quickly growing the head when morphing starts and then quickly shrinking it. You are totally free of defining "passthrough" transformation for your morphing projects.

You can also use the warp channel when doing a simple warp. In that case, you can animate the warp effect in more details than just defining the ending shapes. You can actually define the evolution of the warping effect against time.

Warp channel for still images (warp/morph)

Let's use an example. Say you want to make the eyebrow go up twice while the face is morphing into another one.

1. Set the curves in as you would for a regular morph, and make sure the preview is OK.
2. Go to the warp channel in the timeline view and enable the Anim option.
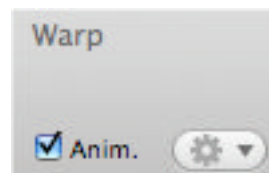
3. Tell the warp channel that it should start from the set of curves of Image A and end with the one of image B. To do this, select Image A in the left editor and the Warp Channel in the center editor. Select all curves, set the time cursor to 0,.
4. Click the *Set Keyframes From* > *Image A* in the Warp Channel menu in the timeline.
5. Select Image B in the left editor, but this time, move the time cursor to 5 seconds (the end of the target), so that keyframe will be created at that time.
6. Click the *Set Keyframes From* > *Image B* in the Warp Channel menu in the timeline. The Warp channel now properly starts from the curves defined in Image A to the curves defined in Image B.
7. Next, you have to specify that the Warp Channel curves will be used unlike a classical morph. This is achieved through the Blending and Motion panel.
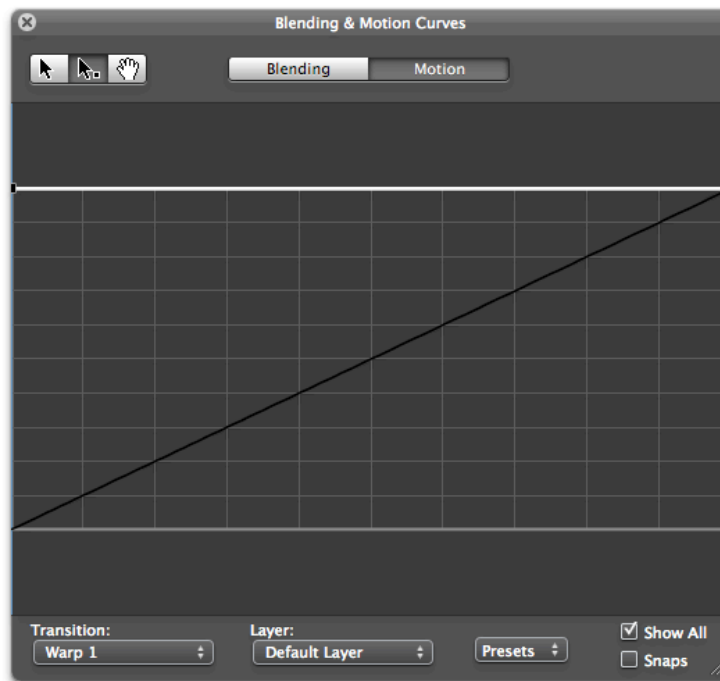
8. In that panel, choose the Motion mode (top), then select the Warp 1 Transition (bottom). Notice that the value of the curve is zero, meaning the Warp Channel is ignored.

9. Click the Presets button, choose One instead to make the Warp Channel valid throughout the transition.

10. We'll make the eyebrow go up at 0.5s and back down at 1.0s. Choose Image A in the left editor and the warp channel in the center editor. In the center editor, select the eyebrow curve. Put the time cursor at 0.5s and move the eyebrow. Repeat the process at 1.0 second.

11. Now you can preview the morphing effect that includes the warp transformation overtime. You notice the morphing performs as usual at the beginning but that the eyebrow has an additional animation between 0.5 and 1.0 second.

You can find this document in the Help menu, *Help > Examples > Warp Channel Example.*

Warp channel for movies (warp/morph)

The concepts described in the previous section for still image morphing/warping using the warp channel are also valid for movies. The results are even more impressive.

Creating Keys from Morph for Warp Channel

Because the warp channel is used to further transform the result of morphing, you usually want to initialize the warp channel to the current *morph curves,* at various times. Morph Age has an option for this purpose.

1. Select the curves you want to initialize with morph result.
2. Choose the desired time (you can repeat the process for various times).
3. Go to the warp channel menu and choose *Set From Morph Result.*
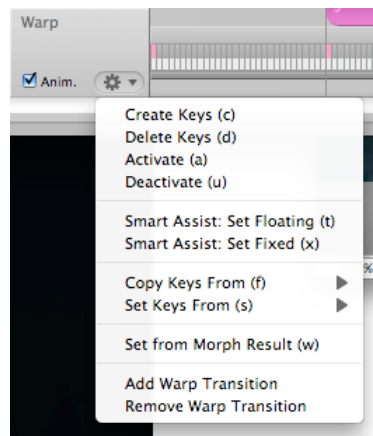
A common way to use this feature is to first create a number of keys throughout the warp transition with this mechanism, then to start modifying the curves for some keyframes.
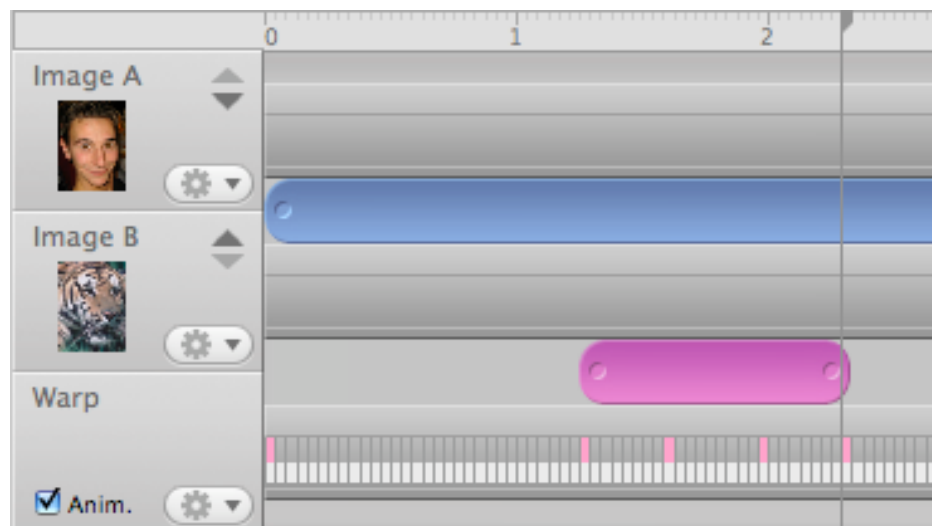
This screen shows how 4 keys were created for the warp channel, with both extremes meant to stay fixed, while the keys in the middle are intended to be changed to impact the morph effect just there.

6. Rendering

Rendering is the process of computing the output image from the given curves. You can render either a single image from a morphing or warping document, or an entire sequence as a QuickTime movie.

Rendering to a Still Image

You render a single image by clicking the render image button in the toolbar, or by using the ⌘R keyboard shortcut.

The rendered image corresponds to the current editing time. You can set it from the target drawer.

The rendered image appears in the render window.
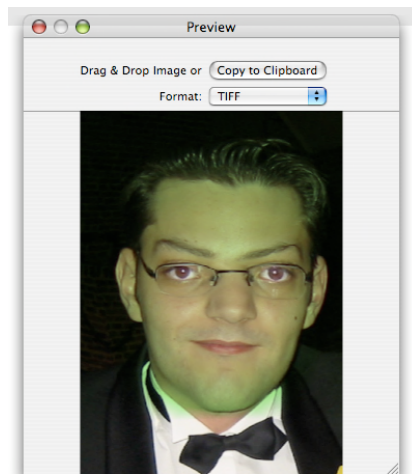
You can save it to disk by dragging and dropping it at the appropriate location. You can choose the format from the following: TIFF, GIF, JPEG, PNG. Alternatively, you can copy the image to the clipboard by clicking the *Copy to Clipboard* button and then paste it into other applications.

Note that the size of the rendered image is set from the Info pane, Other tab, as explained earlier in this tutorial.

Rendering to a QuickTime Movie

You render the image sequence, or animation, to a QuickTime movie by clicking the render movie button in the toolbar [icon], or by using the ⇧⌘R keyboard shortcut. The movie sheet appears and lets you choose movie parameters.
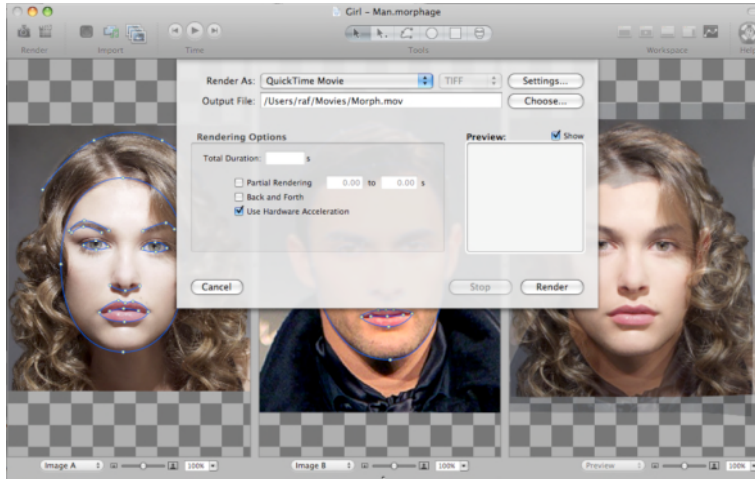
Output File

You can set the output file by clicking the *Choose* button. By default, the movie is saved as *Morph.mov* in your Movie folder.

Rendering Options

The total duration tells you how long the project lasts, as well as the output movie. You can choose to render only a part of the project. For this, you have to enable *Partial Rendering* and set start and end time.

Next, you can choose the frame rate. The frame rate tells how many images per second the movie will be made of. For reference, theatre movies have 24 frames per second (FPS), television 30 or 25 depending on the region. Simple computer animations sometimes only have 15 FPS. This is usually enough for previewing purpose.

When using the back and forth option, the rendered movie will make a full cycle, making it suitable for loop animation.

Finally, you can set QuickTime settings by clicking the QuickTime Setting... button. The Compression Settings dialog appears.
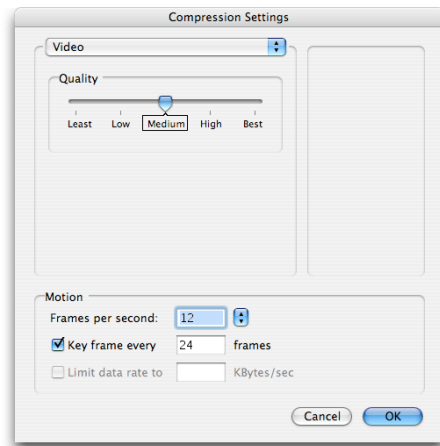
In this dialog, you can choose the codec (for compression/decompression) to use to encode the movie. Many options are available, depending on your particular application. For high quality website, you may use MPEG-4 or Sorenson. For output to DVD or composing in iMovie, DV may be a good choice.

7. Preferences

You can change a few options that are global to Morph Age in the Preferences panel.

You access to the Preferences panel by choosing Morph Age < Preferences... or alternatively with the ⌘-comma (,) key combination. You can always revert changes to their factory defaults by clicking Restore Defaults button.
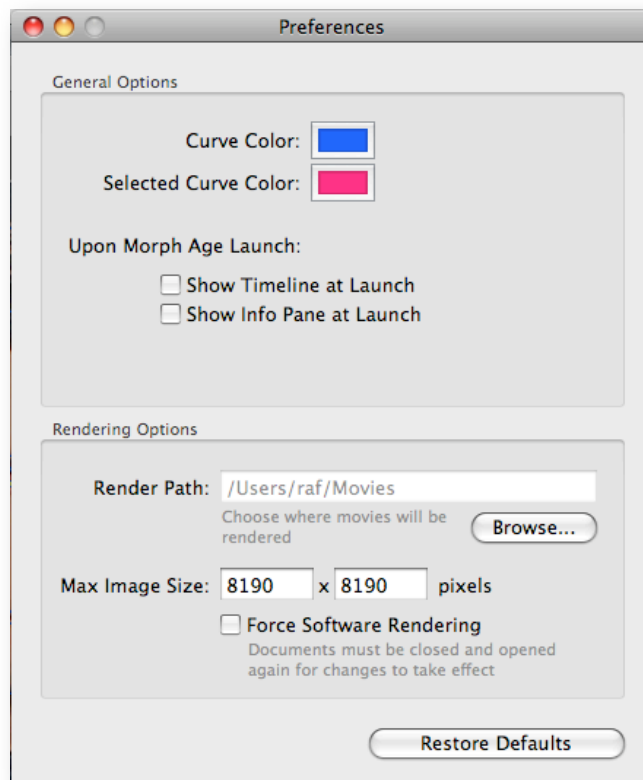
Changing Curve Colors

Depending on the images you are working on, you may want to change the curve colors for better readability.

You can change both the unselected and selected curve colors in the preferences panel.

Enabling Images and Info panes at Launch

By clicking the corresponding checkboxes, the panes will show up when opening Morph Age. Even if this option is disabled, the panes can be accessed by clicking their corresponding button in the toolbar (respectively and).

Opening Expert Info Panes at Launch

Expert info panes are the following sections of the info pane:

• Layers
• Blending Options
• Special Effects.

When checking this option, Morph Age will automatically open these sections at launch.

Changing Render Path

The render path is where output movies are stored. Default folder is your Movies folder (in your home) but you can change this with the *Browse* button.

8. Troubleshooting

In this chapter, you find some common problems you might encounter when using Morph Age.

Rendering has Visual Artifacts

- Check that the curves do not intersect each other if you don't use layers.
- Also, concave curves may produce that kind of artifacts.
- It can also mean that Morph Age has not enough information on how to transform images at that place. You should either increase curve subdivisions and/or add more curves there to help Morph Age to find the appropriate transformation.

Pro Only

Rendered Movie has Poor Quality

The QuickTime codec plays an important role there. You should use appropriate codecs for your application. MPEG-4 and Sorenson give good quality for reasonable file size. You can also try to disable codec keyframes from the compression dialog.

Movies Cannot Be Opened

Morph Age documents do not store input QuickTime movies internally, but their relative file path instead. That means that if you move the document or the movies separately, Morph Age won't be able to locate them. The missing movie dialog will request your help to locate the movies.

Small Details in Images Difficult to Access

You can use the zoom slider to accurately set the curves. Morph Age algorithm has subpixel accuracy and as such, will provide better results if the curves are at exact locations.

Is your problem not listed here? Do you need help?

Simply take part in discussion groups on http://www.creaceed.com/forums.html or write to support@creaceed.com.

9. Commonly Used Keyboard Commands

Common	
⌘O	Open a new document
⌘N	New document
⌘⇧N	Add images
⌘R	Render still image
⌘⇧R	Render movie
⌘⇧A	Enable Smart Assist
⌘F	Enter/exit fullscreen

Time Navigation	
←	Previous keyframe
→	Next keyframe
⌘←	Previous frame
⌘→	Next frame
⌘↑	Go to beginning
⌘↓	Go to end
Spacebar	Play / stop

Channel Ops	
C	Create keys
D	Delete keys
A	Activate curves
U	Deactivate curves
T	Smart Assist: Set floating
X	Smart Assist: Set fixed
W	Set from Morph (Warp only)

Workspace	
⌘F	Enter/exit fullscreen
⌘E	Toggle First Editor
⌘P	Toggle Preview
⌘I	Toggle Info
⌘T	Toggle timeline
⌘B	Show blending & motion curves

Creaceed is a Belgian company made up of passionate people with expertise in signal and image processing. They provide professionals and consumers on the Mac platform with creative applications that are intuitive and easy to use: Morph Age for morphing and warping images and movies, Hydra for HDR image creation from regular photos, and Magnet for augmenting QuickTime movies with special effects that are tracking motion.