

BASIC MORPHING

USING MORPH By Print Artist Pro

This tutorial leads you through the creation of a simple *Morph* movie. By working through this lesson, you will discover how easy the *Morph* program is to use, and you will gain an understanding of how *Morph* can best work for you.

PREPARE A NEW STORYBOARD

Launch the program; if the program is running already, close any open windows, and choose New from the File menu. A new *Morph* document is created, and a blank, untitled *Storyboard* window opens.



Load Two Source Images

At least one pair of images—a *Start Image* and an *End Image*—is required to generate a *Morph* movie. These source images define a transition *Sequence*, and these "images" can be still pictures or movie clips (and the same image can be used as both the Start and End Image). A *Morph* movie can consist of as many Sequences as you wish. Each Sequence is represented in the Storyboard window as small, side-by-side previews of the Start and End Images. These previews are called *Thumbnails*.

Load the Start Image for the Sequence by double-clicking the blank Thumbnail (the black rectangle) on the left in the Storyboard window. An Open Image dialog box appears; locate and open the sample image called "Photo1.JPG", which is inside the *Morph* folder on the Common Drive.

The Storyboard is updated with a Thumbnail of the Start Image.

The Start Image window also opens automatically, displaying the picture.



Now load the End Image—double-click the right Thumbnail rectangle in the Storyboard window, and open the sample image "Photo2.JPG". The Storyboard is updated:



The End Image window also opens, displaying the picture. The values displayed above and below the Thumbnails on the Storyboard are duration displays, indicating lengths of time in hours, minutes, seconds, and fractions of a second. The Movie Duration display, at the top of the Storyboard window, is the current total duration of the *Morph* movie. The Sequence Duration display, below the Thumbnails, represents the length of that Sequence, determined by the length of the Start Image.

Note: To generate a transition *movie*, *Morph* requires two source animation clips. If you load a still picture as either the Start or End

Image, *Morph* creates a source “animation clip” by repeating the still picture as frames of the “clip” each frame of such a “clip” displays the still image. By default, the length of these “clips” is five seconds; thus, the displayed Sequence Duration is five seconds.

THE START AND END IMAGE WINDOWS

It is unlikely that the features to be transformed will occupy exactly the same location in each image, so you use Key Points and Key Lines to direct the transformation. These points and lines link related features in the two images—transformation proceeds from specified areas of the Start Image to related areas of the End Image. If Key Points are not set, *Morph* will simply transform each pixel in the Start Image to the corresponding pixel in the End Image.

To place and adjust the positioning of Key Points and Key Lines, you work in the Start and End Image windows.

Position the Start Image and End Image windows side by side on your monitor screen, with the Start Image (Photo 1) on the left, and position the Tool Palette in between the two windows, as shown in the following illustration. (You can move the palette and the windows by dragging their title bars.)

This is simply a convenient arrangement of the windows for positioning Key Points. If you’d prefer a different arrangement, you can position the windows accordingly.

PLACING KEY POINTS

From the Tool Palette, select the Key Point tool by clicking its symbol. This tool creates a pair of Key Points each time you click in either the Start Image or End Image windows. That is, for each Key Point you place on one of the images, a corresponding point is created on the other image, in the same relative position.

TOOL PALETTE

Adjusting Tool
Key Point tool (selected)
Line tool

Scissors
Magnifying Glass
Hand
Rotate tool

Begin by placing a Key Point in the Start Image at the center of the man's hairline—click there with the Key Point tool:



Notice the counterpart Key Point, created automatically in the End Image window. Both points are red, indicating they are selected. (Deselected points are green.)



Repositioning A Key Point

As you can see, the Key Point in the End Image matches the position of the Key Point in the Start Image, relative to physical location in click the window. However, in terms of linking similar features in the two images, the Key Point in the End Image is out of position and needs to be moved. To do this, select the Adjusting Tool from the Tool Palette and drag the Key Point in the End Image to the center of the woman's hairline. (When you reposition a point in either window, its counterpart does not move.)



Placing Additional Key Points

Select the Key Point tool again and add a few more Key Points to strategic features of the Start Image. (You can create Key Points on either image, but to make following this tutorial easier, we recommend creating them on the Start Image.) Strategic features include the hairline, nose, lips, and facial outline.

As you place each Key Point on the Start Image, be sure to adjust the position of its counterpart on the End Image. To make this easier, you can use the Adjusting Tool-Key Point tool “hot key” to quickly switch back and forth between the two tools. Press the Tab key on your keyboard to switch from the Adjusting Tool to the Key Point tool, or from the Key Point tool to the Adjusting Tool.



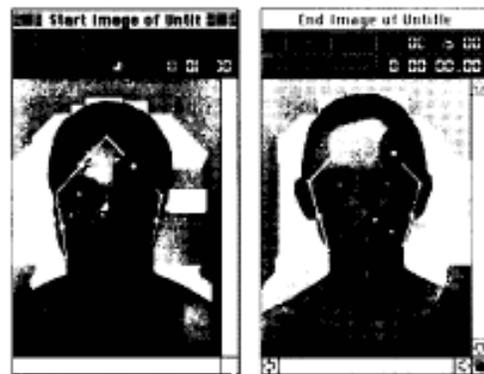
If you do not adjust the position of each Key Point in the End Image as it is created, when you finish placing Key Points you will be left with a number of Key Points in the End Image that are out of position. To correct this, select each of the points, one by one, with the Adjusting Tool to highlight it and its counterpart in the Start Image, and then drag the point in the End Image into the appropriate position.

You can select more than one point at a time: Use the right mouse button to select additional points, or drag out a selection rectangle that encloses the points to be selected.

Drag any selected point to move all of them. Also, you can use the Rotate/Transform tool to rotate and scale the positioning of the selected points.

JOINING KEY POINTS WITH KEY LINES

After placing and positioning Key Points, you can join some or all of them with Key Lines. These lines define paths along which *Morph* will interpolate additional transformation-control points. Thus, Key Lines increase the quality of the transformation, while reducing the number of Key Points you have to place, plus the lines make relationships between various Key Points easy to identify visually.



Note: You can change the number of transformation-control points interpolated along each Key Line. Refer to the section, “Specifying The Number Of Key Line Interpolation Points,” in Chapter 3 for details.

Select the Line tool from the Tool Palette and connect groups of related Key Points by successively clicking the points that are to be joined. You can work in either Image window; the points in the other window are joined automatically.

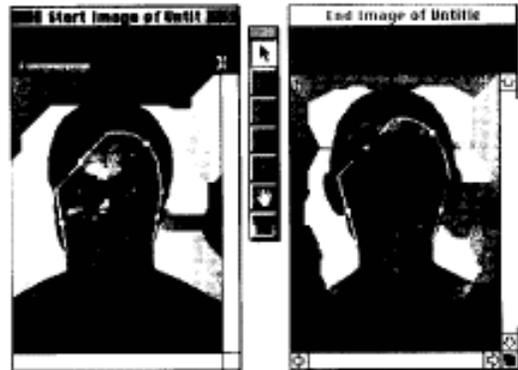
When you click a point with the Line tool, a line automatically joins that point with the previously clicked point. (When you first select the Line tool and click a Key Point, a Key

Line joins that point with the last point placed or selected in the image.) To begin joining a separate group of points, with no line from the last point clicked, click anywhere in the image except on a Key Point to terminate the “string” of lines, and then click another Key Point to begin a new string” of lines.

A square handle is displayed on the midpoint of each Key Line. With the Adjusting Tool, drag this handle to reshape the curve of the line so it follows the desired feature of the image you can drag the handle along the line, as well as “away” from the line in either direction.

Note: You can use the Magnifying Glass tool to increase the magnification of the images so you can adjust the positioning of the Key Points and the curves of the Key Lines with greater accuracy.

‘Finish adding lines, and reshape each line both the Start and End Images. When you are finished, the images on your screen should look something like this illustration:



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To remove a Key Point or a Key Line, click the point or the line handle with the Scissors tool (or select it with Adjusting Tool and press the Delete key). The point or line is deleted from both images.

CHECKING THE MORPHED RESULT



When all the Key Points and Key Lines have been placed, you can view the result of the transformation at any step of the transition to determine if adjustments or additional Key Points and Key Lines are necessary. To do this, open the Morph Image window by choosing Morph Image from the Windows menu. Drag the Morph Control slider at the top of the image to approximately the middle of its range, and then choose Morph from the Sequence menu.

Morph Control slider —A “snapshot” of the transformation from Start Image to End Image, at the specified time, is displayed in

the Morph Image window. To view another intermediate snapshot, move the Morph Control slider a little toward one side or the other, and choose the Morph command again to update the window. If the result at each stage is acceptable, you can proceed to the next step. If the results are not acceptable, re-arrange or add Key Points and Key Lines until the results are acceptable.

DUPLICATING THE SEQUENCE

Generating a movie from the Sequence on the Storyboard will produce a transition in which the man in the Start Image is transformed into the woman in the End Image. To extend this *Morph* movie, let's duplicate the Sequence and exchange the Start and End Images, so the man is transformed into the woman and then back into the man. (Sequence duplication is extremely useful when you want to create a movie in which one image becomes another, which in turn becomes another, and so on.)



Click the Storyboard to make it the active window, and then choose Duplicate Sequence from the Sequence menu to place a copy of

the first Sequence into the Storyboard. Resize the Storyboard window so you can see both sets of Thumbnails. Now click the new panel to make the second Sequence the active Sequence, and choose Exchange from the Sequence menu. This swaps the Start and End Images, and all Key Points and Key Lines. (Since the Start Image and End Image windows are open, you will see this take place.)

That's all there is to it—you're ready to generate the movie.

CREATING THE MOVIE

To generate and save a movie of the transformations, choose Save Movie from the File menu; the Save Movie As dialog box appears.



Be sure Video for Windows is displayed in the *Save Movie as Type* field. Enter "Test" as the movie name and then click the *Compression* button to open the Compression Settings dialog box so you can specify a frame rate for the movie and select a video-compression technique.

Be sure Microsoft Video is displayed on the upper drop-down list, and be sure 8 is displayed in the *Frames Per Second* field. Click OK to close the Compression Settings dialog box, returning to the Save Movie As dialog box; click OK in that dialog box to close it and initiate the morphing process.



The movie is generated by successively morphing frames from the Start Image with the corresponding frames from the End Image. A progress box is displayed, tracking the movie generation.

VIEWING THE MOVIE

When the morphing process is complete, you can play the movie.



Choose Movie from the Open submenu of the File menu; the Open Movie dialog box appears. Locate and open your Test movie. The Video for Windows movie player appears, displaying the first frame of the movie. Click the Play button to view the movie.



Congratulations! You have created your first *Morph* movie! In addition to playing it on-screen, or transferring it to videotape, you also can print the movie frames as a flipbook, and you can select the movie as your screen saver.

PRINTING THE MOVIE AS A FLIPBOOK

The frames of a *Morph* movie can be printed as a series of thumbnail images that you can collate and staple together to produce a flipbook of the movie.

Choose Print Flipbook from the File menu. The Open Movie dialog box appears; select and open the movie. The Print Flipbook dialog box then appears. Since you are printing a trial flipbook, you can save time and paper by reducing the number of images printed: click *Select Frame Rate*, enter 4 in the related text box, and then click OK to close the dialog box and initiate printing. (Since the movie was generated at 8 frames per second, only every other frame will be printed.)

Thumbnails of the movie frames are printed in rows on the necessary number of printer pages. You can cut out these images and bind them into a flipbook that displays the animation you created.

This completes the tutorial session—you now have a basis for using *Morph*.