MacWorld Workshop

Tutorial

by

Anthony Redhead

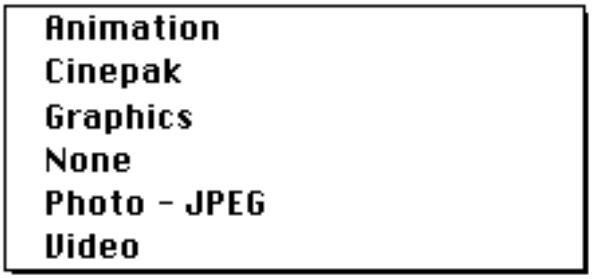
John Coates Performance Center
San Francisco, January 4th, 1994

Live Picture is published exclusively in North America by HSC Software

Tiff2Ivue 1.3r2

Tiff2Ivue 1.3R2 now supports the QuickTime interface for JPEG encoding/decoding. This allows you to compress IVUE files while converting to IVUE format. Compression can be very useful for saving storage space on your hard disk. JPEG compression allows you to create IVUE files which are much smaller than the original TIFF files.

Six different compression qualities are available.



Animation: The animation compressor employs a compression algorithm developed by Apple based upon run-length encoding techniques. Run-length encoding is a process that discards continuous regions of duplicate colors. This works well with images that have been computer generated because they tend to contain large areas of uniform color. In general, however, lossless compression is not very effective with scanned photographs because colors in these images usually contain few areas of continuous color.

CinePak: Offers high compression ratios, better image quality and faster decompression than the Video compressor.

Graphics: Does not achieve high compression rates but decompresses quickly.

None: Use the None setting for uncompressed images. This will not affect the image quality of the scan.

Photo- JPEG: JPEG (Joint Photographic Experts Group) is an international standard for compressing still images. Use the Photo compressor for images that contain smooth transitions, or that do not contain a high percentage of edges or other sharp detail. Most natural images fall into this category. For this type of 24 bit image, the Photo compressor produces a reconstructed image that is virtually indistinguishable from the original image at a compression of 10:1. Compression time is almost equal to decompression time.

Apple Video: Apple Video uses a spatial and temporal compression. However spatial compression can cause blurring, streaking and contouring (regions of constant color).

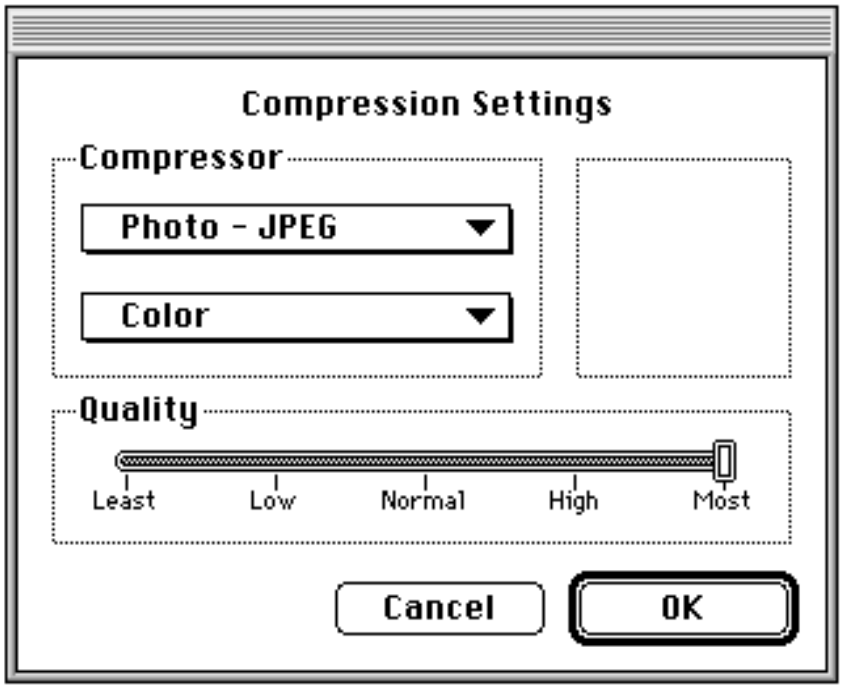
Decompressing slightly slows image-editing operations. Compression accelerator boards compensate for this slower access time and in many cases enhance performance. QuickTime supports most leading

compression accelerator boards such as SuperMac Thunderstorm, Daystar Charger, and Neotech.

Converting a file to IVUE format with compression:

1. Select Menu: File: Open (⌘ O)

2. Open the Tiff File. Select Save As (⌘ S) the Compression Dialog box appears.



3. Select a compression option.

4. Use the quality slider to set the compression quality. The lower the quality you choose the more the image is compressed, and the smaller the file size.

5. Click on OK and the file is converted.

Color options:

Several color options are available depending upon the compression option selected.

Converting a file to IVUE format with compression and changing the color depth to 16 colors.

1. Select Menu: File: Open (⌘ O)

2. Open the Tiff File. Select Save As (⌘ S) the Compression Dialog box appears.

3. Select the Animation compression option.

4. Click on the color selection box. A range of color options appears.

5. Select 16 colors and click OK.

6. When the image is inserted into Live Picture it will contain only 16 colors.

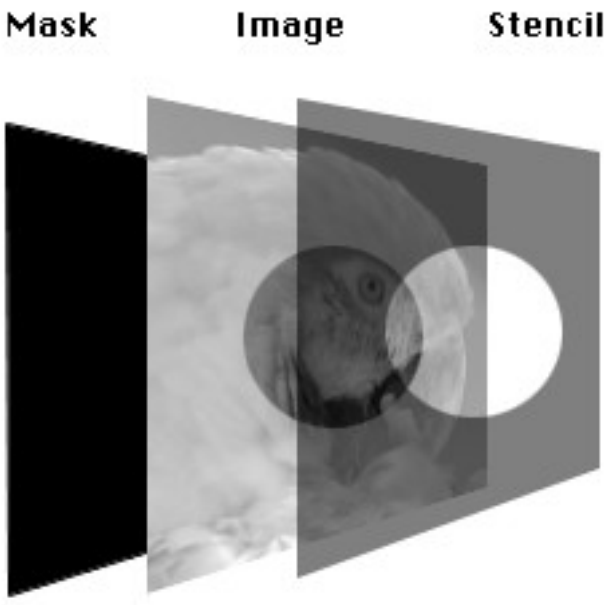
If you plan to build your output file on another system (for instance at a service bureau), and you only use your system to create the montage, you can convert the same TIFF file to IVUE twice, once with compression and once without. Use the compressed version on your system to edit the montage, and leave the non-compressed version on the system where you'll be building the output file. Since the compressed IVUE file is much smaller than the non-compressed file, it is much easier to move from one system to another, and takes up less space on your hard disk. Moreover, no quality is lost, since the final output is built using the non-compressed IVUE file.

Tiff2Ivue 1.3R2 supports the conversion of CMYK Tiff files to IVUE format. The first time you convert a CMYK image, Live Picture will take a few seconds to build the CMYK to RGB model. A dialog box informs you that the model is being built.

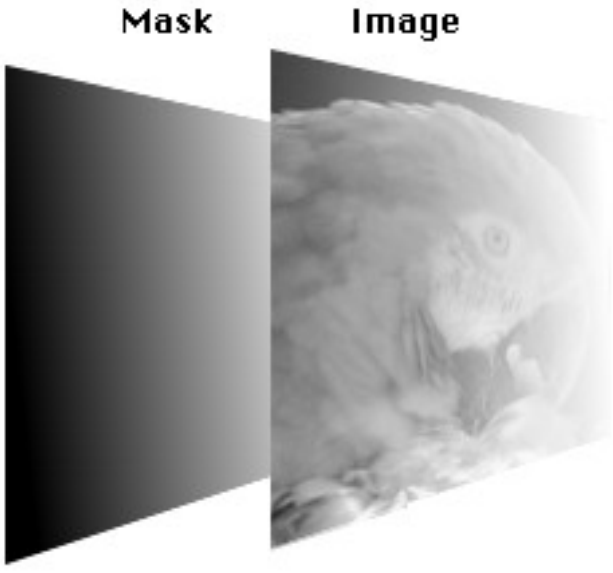
Layers

The layer structure:

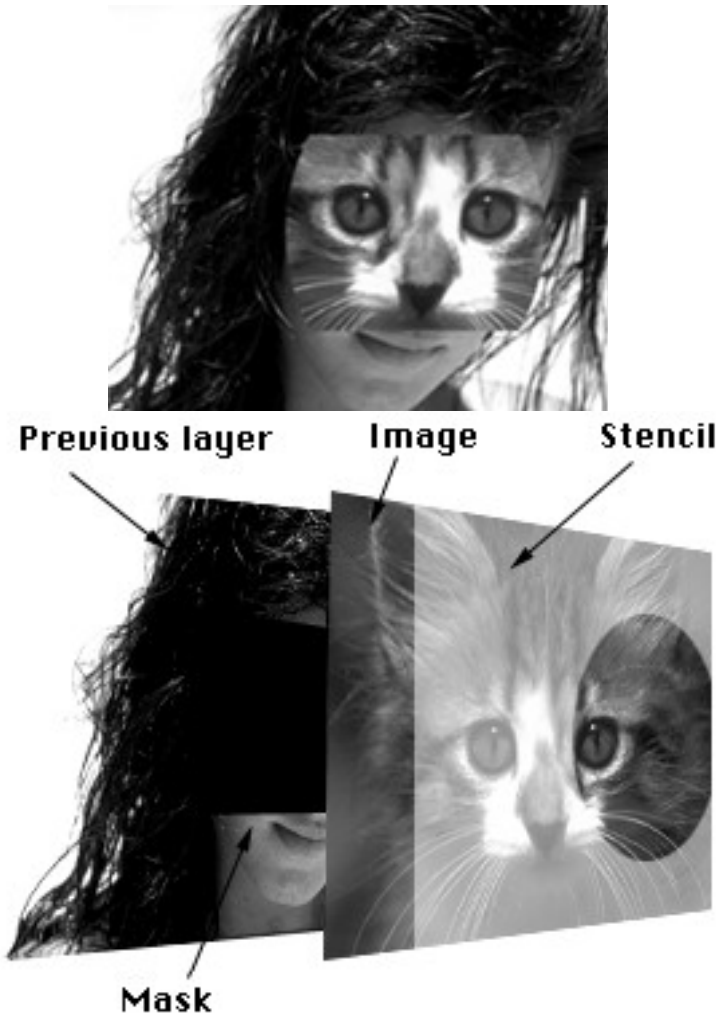
Every layer in Live Picture has the capacity to contain 3 elements: A mask, an image and a stencil.



The mask defines how the image as a whole will interact with the layer beneath it. The mask can isolate the whole image and allow a 100% of the image to be seen or the mask can contain levels of gray which allow transparency overlay effects.



Every image inserted into Live Picture has a mask of some shape or form, in addition a stencil can be incorporated into the layer to create additional masking options.

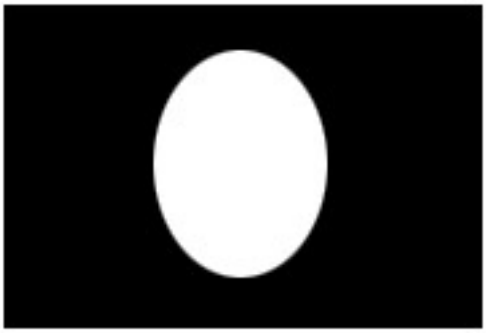


Exploded view of composite

Mask

Previous layer

New Insert



Stencil

Individ

ual elements of the composition

Image Insertion

Live Picture offers three different insertion modes: Standard, Advanced and Masking. Picking the type of insertion to use depends upon several factors.

1. How the inserted image is to appear against the background or other images that are already inserted. For instance, are areas of the image to be hidden by a mask, is the image to be ghosted or defined by a specific shape?

2. What manipulations are going to be applied to the image, will it need to be distorted or cloned?

There are two steps to inserting an image: viewing the image and masking the image. The first step is common to all three image insertion modes. It is the second step - how you choose to mask the image - which will determine which mode you choose.

Standard insertion is the simplest form of insertion.

Insert an image standard mode:

1. Select Menu: Mode: Insert Standard (⌘ I). A dialog box opens.
Select the IVUE file you want to insert.

2. Position the pointer in the window, this point will define the top left hand corner of the image. A crosshair cursor appears, drag out to the bottom left of the window, an outline box proportional to the original file will appear, release the cursor. An image fills the area just defined and the Image dialog box appears.

The image at this point is temporarily placed onto the layer and has an opacity level of 50% to allow visual positioning over other layers.

At this time the image can be manipulated by scaling, rotation, skewing and repositioning. The resolution of the file can also be changed.

3. Once the file has been positioned click ok.

4. The image is still in a temporary state and must be "pasted" into the layer by the addition of a mask. This mask will allow the image to float over any other layer or the background.

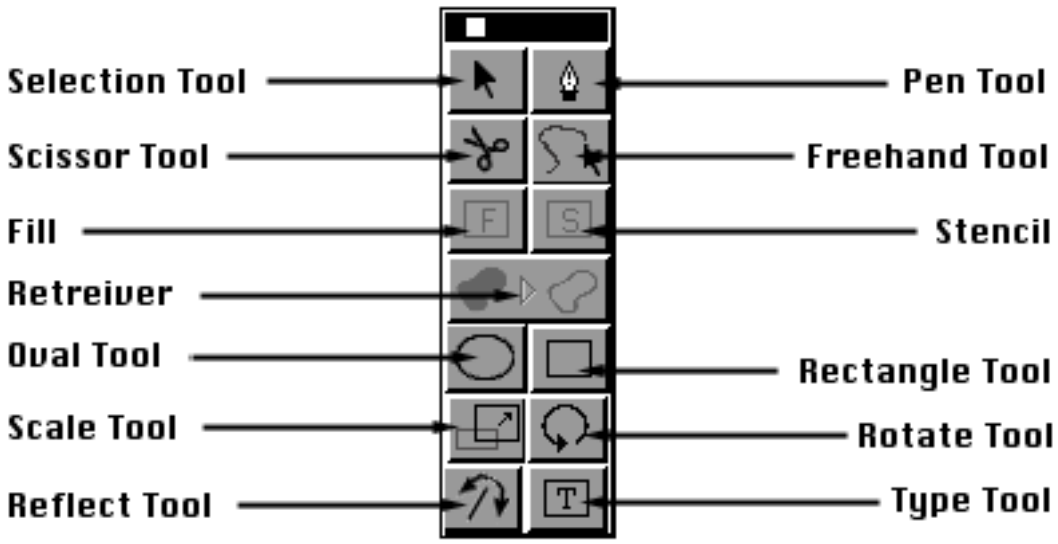
5. In the case of the kitten a rectangular mask is drawn, using the marquee tool, that crops the top and bottom of the image. The image is now "pasted" into the layer.

6. The stencil is created using Bezier curves that form the oval edges of the image.

The layer now has three elements resident in it.

Shapes Palette

The shapes palette is located by selecting Menu: Palette: Shapes (⌘ 4)



The Shape palette contains the tools you'll need to create closed paths.
A closed path is series of vector segments without a beginning or endpoint. A closed path can be used to create either a stencil or a mask. The Shape palette also contains the commands for converting a closed path into a stencil or a mask and for retrieving the closed path of a stencil to modify it. It also contains the Type tool.

Creating a path.

Pen Tool

The pen tool allows you to create and connect anchor points and paths.

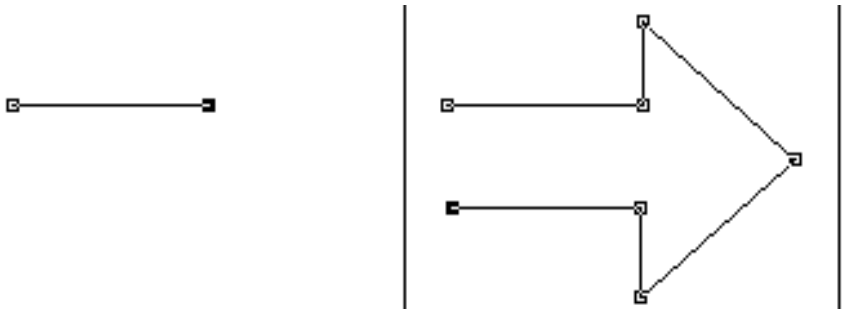
To Draw straight lines with the pen tool:

1. Select the pen tool.

2. Move the tip of the pen point to where you want the straight line to begin, and click. A solid square appears. This is an anchor point, and it is selected until you define the next point.

3. Click again where you want the first segment of the straight line path to end.

4. Continue clicking to create additional straight lines.



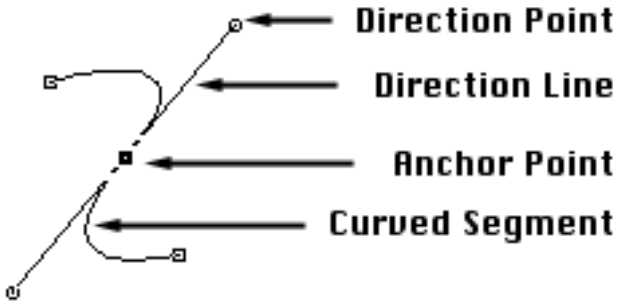
The last anchor point added is always a solid square, which indicates that it is selected. Previously defined anchor points become hollow squares.

5. End and close the path by clicking on the first anchor point. A stencil or mask cannot be generated until the path is closed.

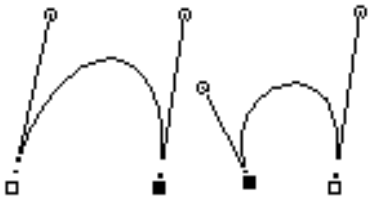
Drawing curves with the pen tool

On curved segments, each selected anchor point displays either one or two direction points, at the end of direction lines. Direction points and lines define the shape of a curved path. The direction lines are always tangent to the curve of the anchor points.

The position of each direction point and direction line determines the size and shape of the curved segment.



The slope of each direction line determines the slope of the curve. The length of each direction line determines the height or depth of the curve.

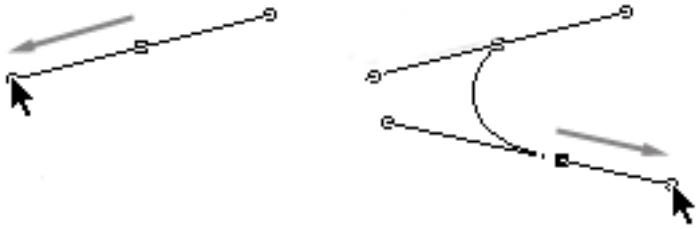


To draw a curved path:

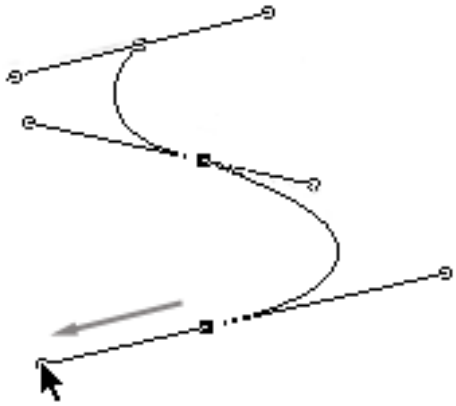
1. Select the pen tool

2. Position the pen tip where you want the curve to begin. Hold down the mouse button. The first anchor point appears, drag in the direction you want the curve segment to be drawn. As you drag the pointer leads one of two directions points.

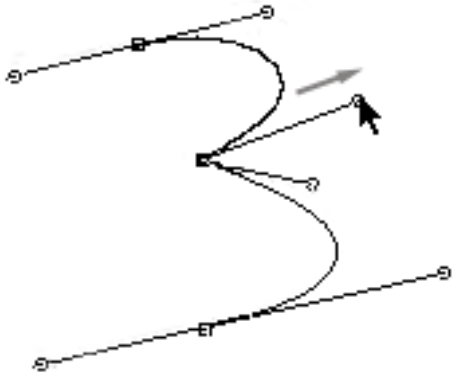
3. Position the pointer where you want the curve segment to end, press the mouse button, and drag in the opposite direction to complete the segment.



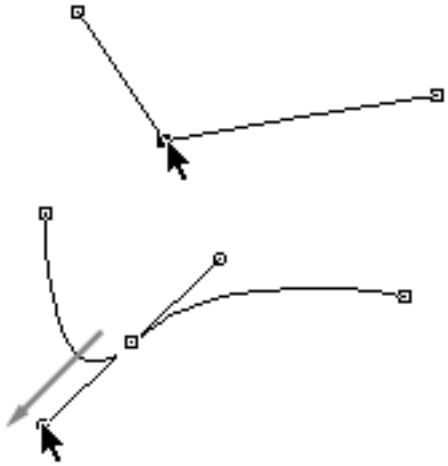
4. To draw the next segment of a continuous curve, position the pointer where you want the next segment to end, and drag away from the curve.



5. To change the direction of the curve and create a non continuous curve, select the selection tool, drag a marquee around an anchor point to highlight the direction lines. Hold down the control point and select one of the Direction points. Drag the direction point to create the required corner.



6. To create direction points on a corner point which has none, hold down the Control key and drag out a direction point. The other direction point will follow. The two direction points will lie on a straight line.



Selection Tool

The selection tool allows you to select a segment, one or several points, an entire path, or several paths. It is also used to move and duplicate selections, and to convert corner points to smooth points.

To select a segment, click the segment. All the points on the path are displayed.

To select an anchor point, click the point. Non-selected anchor points appear as hollow squares. Selected anchor points appear as solid squares.

To select several anchor points, drag the marquee around the points.

To select a path, drag the marquee around every point on the path. You can also press the Option key and click anywhere on the path.

To select several paths, drag the marquee around every point on the paths.

To select all paths, choose Select All in the Edit menu.

To delete a path or section, click the Delete key.

Moving and duplicating selections:

The selection tool can be used to move one or several points, and to duplicate entire paths.

To move an anchor point, click the point and drag.

To move several anchor points, select the points and drag any one of the points or their connecting segments.

To move a path, select the path by dragging a marquee around it and drag.

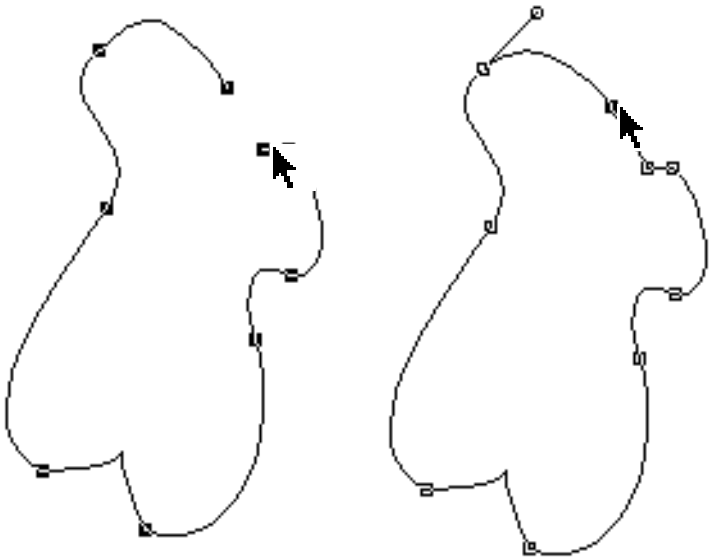
To duplicate a path, select the path, hold down the Option key and drag.

Scissors Tool

The scissors tool allows you to add an anchor point to an existing segment. To add an anchor point to a segment, click anywhere on the segment. The direction points are created automatically.

Freehand Tool

The freehand tool allows you to draw just as if you were using a normal pencil. When you finish drawing with the freehand tool, the anchor points are automatically generated.



If the starting anchor and final anchor point are within close proximity the path will automatically close. If the path is open at the end of a freehand draw use the Pen tool to close the path. Click on the last anchor point and then click on the first anchor point the path will close.

OVAL TOOL & RECTANGLE TOOL

These tools allows you to create an oval, circular, rectangle or square path.

To create an oval/rectangle path, click a point and drag. An oval opens from the point clicked.

To create a circular/square path, press the Shift key, click a point and drag. A circle opens from the point clicked.

You can toggle back and forth from circle to oval, rectangle to square while dragging by pressing and releasing the Shift key. The anchor points are displayed when you release the pressure on the stylus. If you select an oval, circular, rectangle or square path, all the anchor points are automatically selected.

To modify a direction point, deselect the path and click on the appropriate anchor point.

Scale Tool

The scale tool allows you to enlarge or reduce the size of a selection. You can scale along the horizontal and vertical axes, or you can constrain scaling to one axis. You can also constrain scaling to the selection's initial proportions.

To scale a path:

1. To scale along the horizontal and vertical axis without any constraints, click one point of the selection, click another point and drag to scale. A box with opposite corners at the two clicked points visualizes the scaling process.

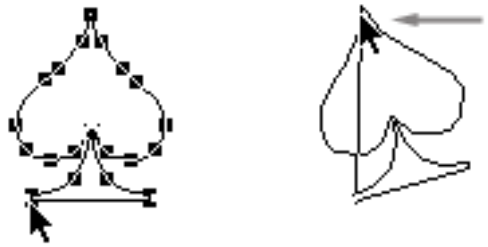
2. To constrain scaling to the horizontal or vertical axis, hold down the Shift key, click one point of the selection, click another point and drag either horizontally or vertically to scale. To constrain scaling to the initial proportions of the selection (i.e. to scale horizontally and vertically in the same proportions), drag at a 45° angle.

If you use the Shift key to constrain scaling, when you have finished scaling, release the stylus before you release the Shift key. If you want to use different scaling constraints consecutively (such as constraining scaling to the horizontal axis, and then to the vertical axis), release the stylus and Shift key, and repeat the process for each new constraint.

Rotate Tool

The rotate tool allows you to rotate a selection.

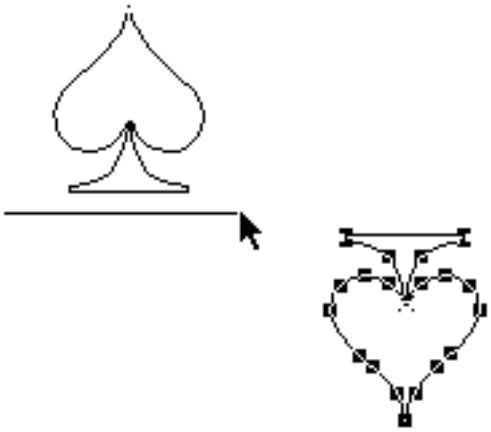
To rotate a selection, click once to select the fixed point around which you want to rotate the selection. Then click another point and drag to rotate the selection.



Reflect Tool

The reflect tool allows you to move a selection symmetrically across an axis.

To reflect a selection, click and drag open the axis across which you want to reflect the selection. When you release the stylus, the selection is mirrored across the axis.



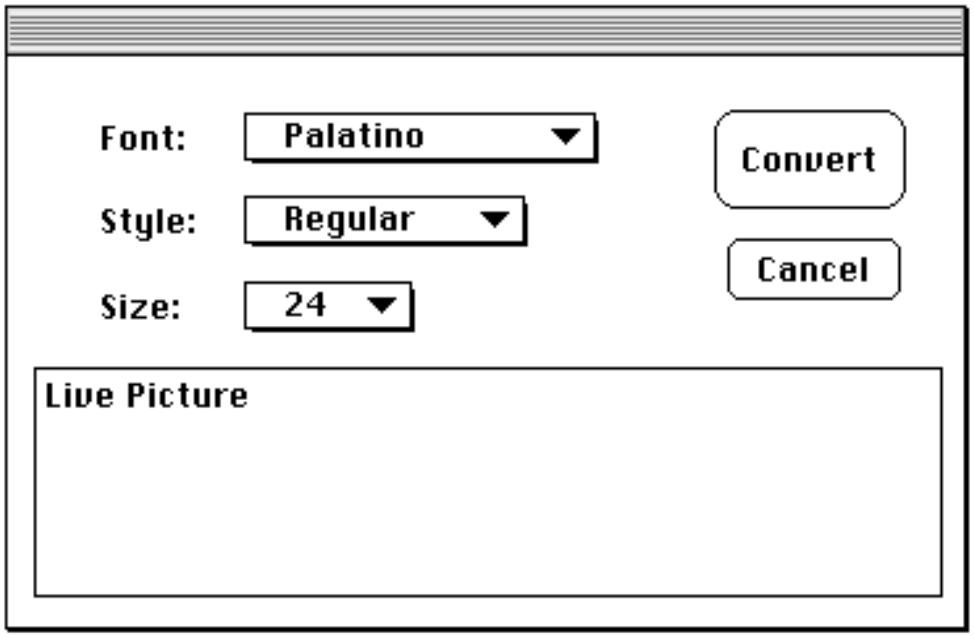
Type Tool

The type tool allows you to create single lines of text, such as Headlines. The type entered is converted into bezier curves, which can then be used to create masks or stencils. The type tool recognizes all TrueType fonts, font sizes and styles available on your system.

To create a Headline:

1. Select the text tool. Click a point in the window, the bottom, left-hand corner of the first letter will be positioned at the point clicked.

The Type dialog box appears.



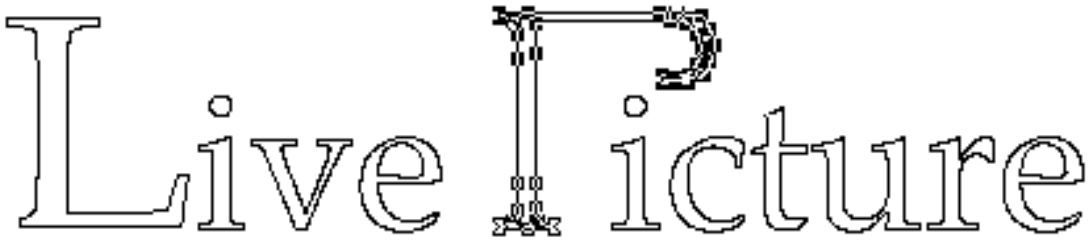
2. Enter the text in the text box. The type automatically wraps in the dialog box, but it appears in a single line in your window unless you enter a manual return.

3. Click Convert. The type appears in the window. Each character forms a closed path.

4. In the Edit menu, choose Select All (⌘ 4). All the closed paths are activated.

5. Draw a marquee around one letter and use the scale tool to resize it.

6. Draw a marquee around selected anchor points on one character and using the selection tool distort the letter.



Fill & Stencil Tools

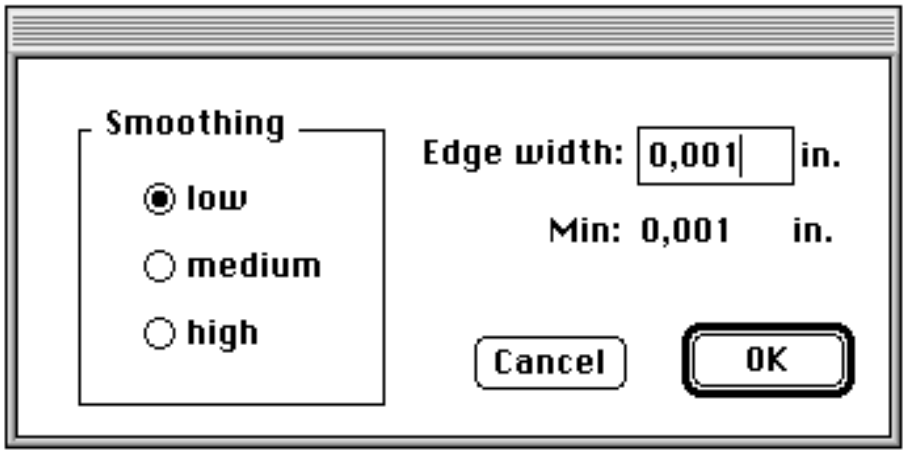
The Shapes palette contains the commands for converting a closed path into a stencil or a fill, and the command for retrieving the closed path of a stencil to modify it.

Using a closed path to generate a stencil:

1. Open the layer in which you wish to generate the stencil.

2.Select or build a new closed path using the selection tool or Select All (⌘ 4).

3. Click S (S generates a stencil), the edge width dialog box is displayed.



4. Enter an edge width.

A low edge width produces a sharp edge and a high edge width produces a softer edge. The minimum edge available is indicated.

5. Select a smoothing level.

If you've entered a low edge width for a sharp edge you should select low smoothing. If you enter a high edge width and apply low smoothing edge artifacts will be seen.

6. Click OK. The path disappears and the stencil is generated. The image will only be visible through the stencil.

Retrieving a closed path:

The Shapes palette contains an icon, called the "Retriever", which allows you to retrieve a closed path after it has been converted into a stencil. With this command you can modify these closed paths at any time.

1. Open a layer that contains a stencil. If you open a layer that does not contain a stencil the "Retriever" option will be grayed out.

2. Click on the "Retriever" icon and the closed path will appear. Select all and the S option is available. At this time the closed path can be modified and new stencil edge options selected.

3. Click OK, the new stencil is generated from the modified closed path.

Using a closed path to generate a mask:

Closed paths can only be used to generate masks in the following layer types:

a. Insert Image/Standard
b. Painting/One Color

Pasting an image using a closed path:

1. Choose Menu: Insert Image/Standard

2. Select an image and using the crosshair cursor drag out the image box. Click OK on the view dialog box and paste the image in using the 100% marquee tool.

3. Select Menu: Palette: Shapes.

4.Select or build a new closed path using the selection tool or Select All (⌘ 4). Make sure that the path covers all or part of the image.

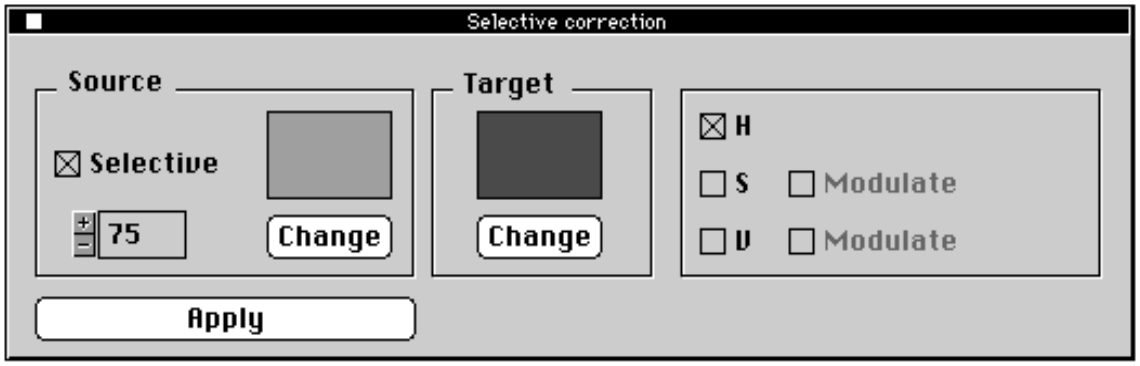
5. Click F (F generates a mask) follow the steps for generating a stencil.

Remember that a mask can be affected by the add or erase brush and can not be retrieved for modification.

Selective Color Correction

Generally speaking, selective color correction allows you to change one color into another. In practice, you select a more or less wide range of colors to be corrected.

After inserting a layer if you wish to perform Selective Color Correction select Menu: Mode: Selective Correction. The Selective Correction dialog box appears.



The following options are available in the dialog box:

Source Color: This is the color we want to change.

Target Color: This is the color that we want to change the source color to.

Selectivity: When the color picker is used to select the source color it averages a small area of pixels. The selective option allows the color range to be compressed or expanded by changing a percentage value. The value ranges from 100 to -100.

A value of 100 means that only the original source color value will be changed, if the value is reduced more colors in the color spectrum adjacent to the source will be changed. Imagine a green leaf on a blue background, selecting a point on the leaf will only load a fraction of the green hues, saturation and luminance contained in that leaf. If the selectivity value is set at 100 only spots of colors will be changed. If the value is reduced to about 65, the color change will spread further across the leaf. A measure of trial and error is required to achieve the desired effect.

A selectivity of 0 is the same as no selectivity and the color change will be uniform across the image. A negative value means that colors other than the source color will be changed.

Changing a color range:

Hue Correction

1. Select Menu: Insert: Selective Color Correction

2. The Converge Target dialog box opens. Select the HSV option from the toolbar. The dialog box expands to reveal more options.

3. Using the eyedropper click on a color in the file, this will be the Source color or the color we want to affect.

4. Using the eyedropper or the color palette select a new color, this will be the Target or the color whose values we will use to change the Source color.

5. Set an arbitrary amount in the Selective box, 60 is a good starting point.

6. Select the H (hue) option box and deselect the S (Saturation) & V (Value) boxes. This means that the apply action will replace the source color (hue) with the target color (hue).

7. Click on Apply. Nothing has happened visually to the file but the correction has been applied globally. Various options are now available to actually see the effect, using an airbrush will allow the color correction to be brushed in. Using one of the marquee tools will allow solid areas of color correction or vignette areas to be seen.

8. If the color is bleeding into other areas of the image with similar colors try placing different values in the selective box. Click apply and the screen will update to the new values.

Saturation correction:

1. If you are continuing from Hue correction go to 2. else repeat steps 1. to 5. of Hue correction.

2. Select the S (Saturation) option box and deselect the H (hue) & V (Value) boxes. This means that the apply action will replace the source color (saturation) with the target color (saturation).

3. Click on Apply the screen will update. If you are continuing on from the Hue Correction repeat steps 7 to 8.

4. Now the source color remains the same but the saturation value of the target color has been applied.

5. By clicking on the Modulate checkbox next to the saturation checkbox you can override the target color and set a specific saturation value. 100 is the maximum amount of saturation that can be applied and -100 is the minimum amount. Every time a value is changed clicking on the apply button will update the screen.

Value correction:

The same procedure applies to Value, in this case the value or gray component of the target file will affect the source color, making it lighter or darker. Once again the Value can be modulated by clicking on the checkbox.

Combinations of all the options can be used simultaneously, the Hue and Saturation of a color can be changed by using an appropriate target color and the value can be modulated to brighten or darken the color.

Creating Custom Separation Table:

Live Picture uses its own color separation table, in which CMYK colors have an RGB equivalent. You can create your own tables to match output devices and screen characteristics.

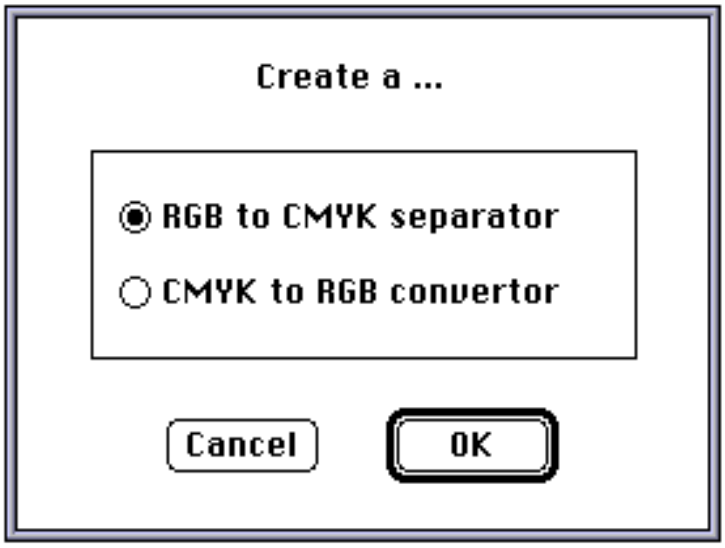
One separation table is provided and you may create several more. Live Picture always looks for and uses the separation table named "CMYK to RGB model". If you want to create and use a new table rename the original model so it can be reinstated if required.

Creating a custom separation table:

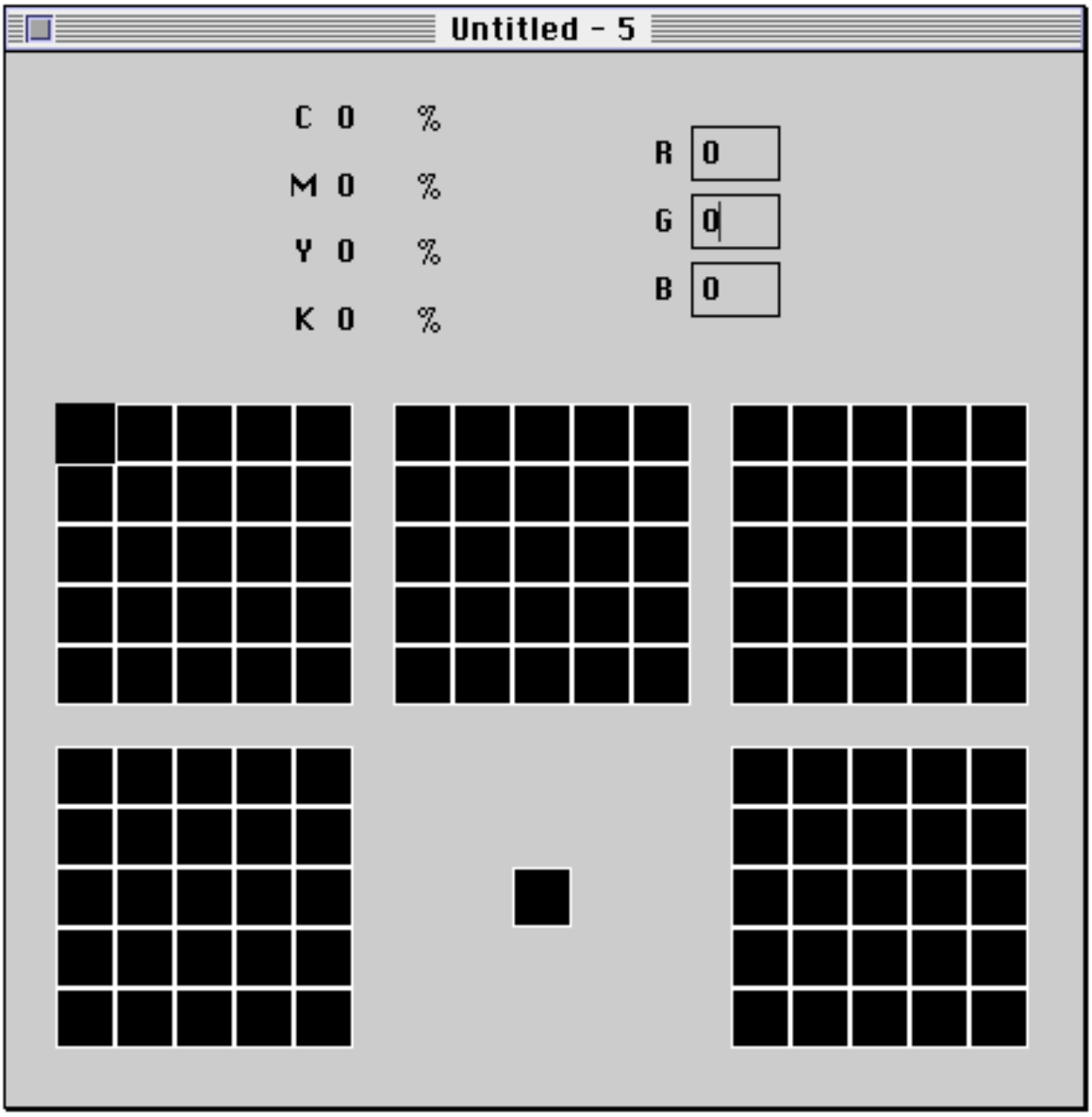
1. Launch the application Mercure 1.0

2. Select Menu: File: New: (⌘ N)

3. A dialog box appears with the option of creating an RGB to CMYK conversion or an CMYK to RGB conversion. Live Picture only supports the CMYK to RGB conversion at this time.



4. Select CMYK to RGB converter. A blank separation table appears. Alternatively you can open an existing separation table and modify it.



5. Each square of the 5 blocks represent a 25% increase in various separations in the CMYK color space. Click on the first square of the top left block, the reading for CMYK is 0% this represents white. Type in 255 in each of the RGB boxes. The square turns white.

6. Proceed to the next square horizontally, the yellow value increases to 25%. Assign an RGB color by typing values into the RGB boxes. Alternatively you can double click on any square to access the Apple Color picker.

7. Continue until all the squares have been assigned color values. Save the file as "CMYK to RGB model" it will be used for the next color conversion.