LIVE PICTURE
WORKSHOP NOTES

2005

v.3

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Part 1

Introduction

Understanding Live Picture

Live Picture is a unique resolution independent digital imaging program that allows the seamless manipulation and editing of high resolution digital files in real time. It is also the most 'photographic' of any digital editing application in terms of its effects and the resulting 'fine print' luminosity of its images.

First conceived of and coded by the French inventor Bruno Delean in the late 1980's as a method of placing on the new Macintosh desktop computers of that time, powerful image editing capabilities that up until then had only been available on very expensive and dedicated hardware dependent workstations such as the Quantel Paint Box. When Live Picture was first 'announced' at MacWorld in 1993 it featured a fully implemented 16 bit workflow, independent and unlimited layers, and the ability to process in real time any number of images of any size. At the same time Adobe Photoshop™ didn't even possess layers or a layer's palette, let alone resolution independence or real time processing. Even the simplest image editing tasks were extremely difficult to process in early versions of Photoshop™, and expensive accelerated video cards were required in the most powerful computers to efficiently process even relatively small Photoshop™ files. Overnight Live Picture created a new standard in the editing of digital photographs, that today's pixel editing programs like Adobe Photoshop still do not even come close to matching.

The main innovations in Live Picture that were not found (and in many cases are still not available) in other programs such as Photoshop are:

Resolution Independence
All effects created in Live Picture, such as painting, filters, and masks, are resolution independent. This means that they can be output at any size without resorting to interpolation of pixels. The effects are mathematically regenerated at the time of output during FITS raster image processing (FITS RIP) at any specified resolution.

Layers
FITS layers can be reordered, deleted, resized, scaled, etc. Although other programs in the early to mid 1990s had 'layers' or 'objects', they didn't treat brush effects, such as painting, lighting, blurring, and color correction, as independent layers. The number of layers in Live Picture is unlimited and doesn't depend on RAM memory.

Understanding Live Picture

Selective Undo

Because of the FITS' technology mathematical approach, any effect in any layer can be progressively modified or completely undone.

IVUE Technology

IVUE is unique in that it permits both fast viewing and geometric changes. With IVUE, you can basically zoom into a 400MB image in just a few seconds. No special hardware or extra memory is required. The other important aspect of IVUE technology is that Live Picture can work directly on JPEG compressed images. It doesn't have to decompress the entire image before using it. Only the necessary pixels are decompressed. This greatly facilitates the use of IVUE over networks, telecommunication lines, and on CD ROMS.

Brush Technology

In Live Picture, everything is done with brushes-not just painting, but image insertion, ghosting, distortion, color changes, blur, sharpen, etc. The brush size is unlimited. For example, you can sharpen a 400MB image with a single brush stroke. And the brush operates in real time, i.e. its speed is independent of the underlying file size.

Masking

Live Picture has semi-automatic silhouetting. It takes the previous background color and, when the object is silhouetted, automatically calculates the difference between the previous and new backgrounds, and sets the edge using advanced 'Chrominance Compensation' that virtually eliminates fringing and other selection artifacts.

Tragically Live Picture suffered the fact of many innovative and revolutionary applications and was discontinued in March 1999. However while it was never recompiled to run under OS X, it works perfectly in Classic mode. Indeed under Classic it is remarkably stable, even rivalling its legendary stability under Mac OS 8.1. Recently a special hacked version of Live Picture has been made available which includes additional key board short cuts and most importantly larger dialogue boxes that are better scaled to today's massive desktop monitor resolutions. Live Picture lives on!

Live Picture is also supported by a very active and inspiring Discussion Group (see bibliography). These introductory notes are in part based on an interview with Bruno Delean by E. Sapwater that was first published in Photo Electronic Imaging, Vol.37, No.4, 1994.
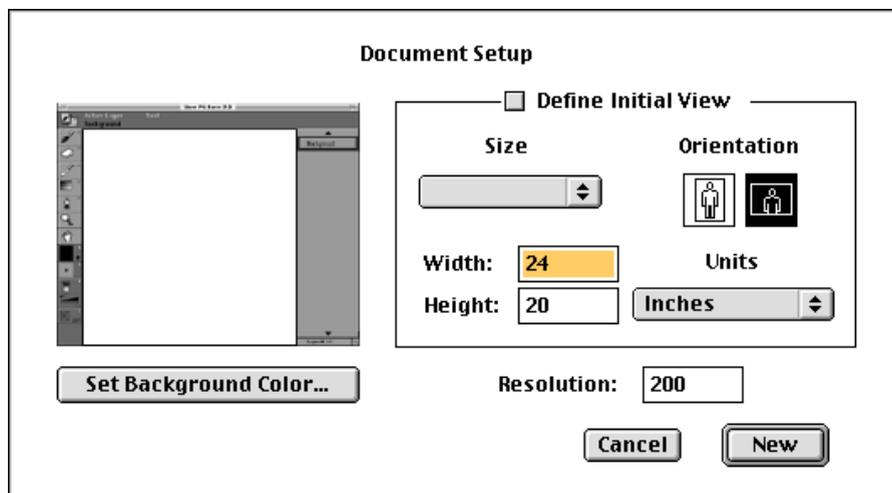
Part 2

Setting up Live Picture

<u>Setting up Live Picture Involves</u>

1. Setting up the Document Space
2. Setting up the General and ColorSync Preferences

Document Setup

Before creating a document for the first time go to 'File/Document Setup' to define the document's background colour and resolution:

An initial view can also be setup to facilitate the design and page layout within a known space. Checking the 'Define Initial View' box and setting the dimensions will automatically generate the same initial view every time a new document is created. For example if your output is always on an A4 sheet, it would make sense to begin with an initial A4 view.

However when working with single images it is often unnecessary to define an initial view (or page layout). Just ensure that 'Auto View' is checked ON in the View Menu so that a new view is automatically created exactly the same size as an inserted image. In the case of a single image that doesn't need to be further cropped, this is often the only view that will be required. Views simply facilitate how we navigate and manage our image editing.

Preferences

General Preferences

The Edit/Preferences/General settings dialogue box is relatively straight forward and is well documented in the Live Picture manual. My basic settings are:
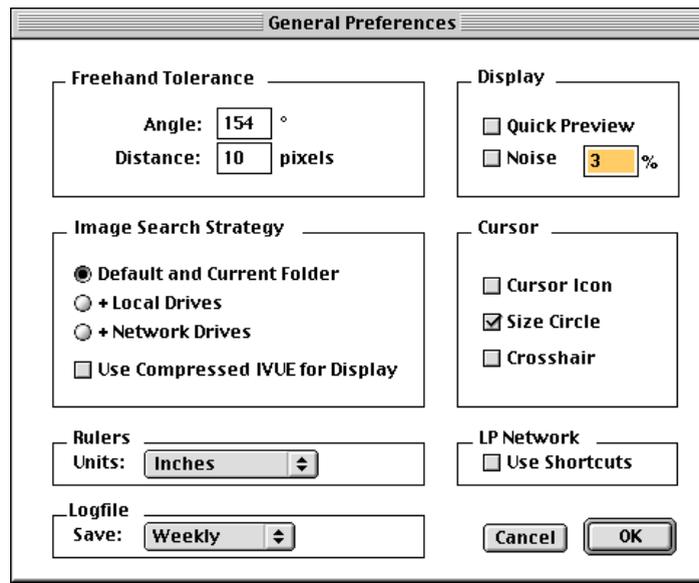
ColorSync Preferences

The Edit/Preferences/ColorSync settings dialogue box includes a Reference (or Source) profile, a Monitor profile, and an Output (or Destination) profile.
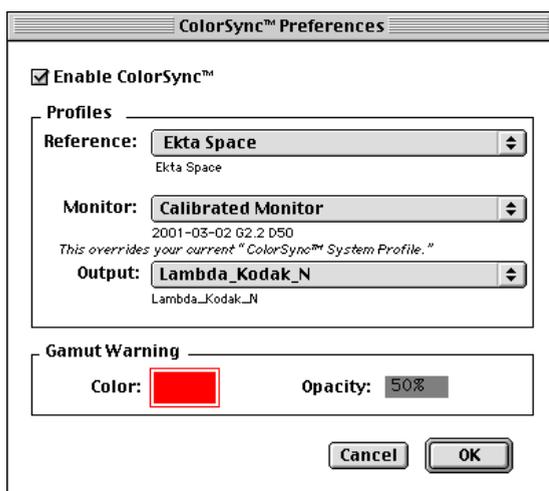
With ColorSync enabled, the View Menu allows <u>Display Matching</u> where the image is converted to the monitor's profile before being rendered to the screen, <u>Soft Proofing</u> for evaluating the image as printed, and <u>Gamut Warning</u> to highlight colours that are outside of the printer's (destination) gamut.

Live Picture uses the Mac OS ColorSync engine to manage the profile transformations both on screen and in the Build dialogue box.

Memory Management

Allocating System Memory

Irrespective of whether Live Picture is running under Mac OS 8, OS 9 or OS X Classic, System Memory (RAM) needs to be allocated. Many functions in Live Picture operate very efficiently with as little as 72 Mb RAM. However other functions such as Building Images can be significantly improved with a higher RAM allocation.

OS 8 and OS 9

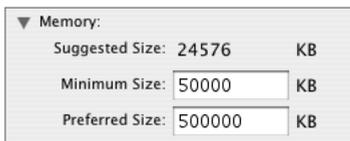Click once on the Live Picture icon (in the Applications Folder) to highlight it - don't start up Live Picture, just highlight its icon. Then go to 'File > Get Info' (Cmd + I) to open the Information Dialogue where you can assign Memory to Live Picture:

Set the Minimum Size to twice the Suggested Size, and set the Preferred Size to as much free memory as can be allocated.

To determine the maximum 'free' RAM that can be allocated to Live Picture, Click on the coloured Apple icon in the top left corner of the screen and select 'About this Computer' from the drop down menu. This reveals how much memory the System is using, and how much is 'Unused'.
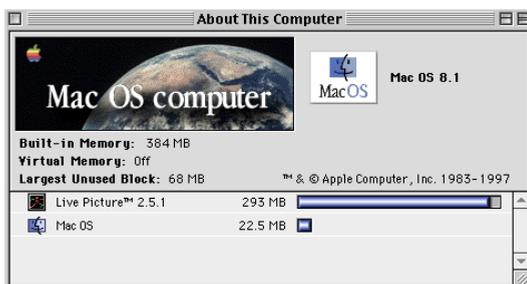
Multiply the amount of memory the System is using by a factor of 3, and then subtract this value from the 'Largest Unused Block' to determine the amount of memory to set as the Preferred Size. This value is not absolute, however too little free memory may crash the System

OS X

Under OS X Classic you can still allocate memory to LP but not relative to the operating system (as you can under OS 8 or 9). Set the Minimum Size to twice the Suggested Size and set the Preferred Size to at least half of the total RAM memory that is installed on the computer. OS X's dynamic memory management will then ensure trouble free operation.

<u>Interface</u>

Live Picture has a very simple interface across three distinct areas of the screen:

1: The **MENU BAR** is across the <u>top of the screen</u>.

2: The **TOOL BAR** is on the <u>left side of the screen</u>. This can be toggled between two settings; the <u>creative tool bar</u> and the <u>positioning tool bar</u>. Each contains numerous tools and options. A <u>view tool bar</u> is also accessible from the View Menu on the MENU BAR.

Creative Tool Bar

Contains tools such as brushes, erasers, colour pickers etc.

Positioning Tool Bar

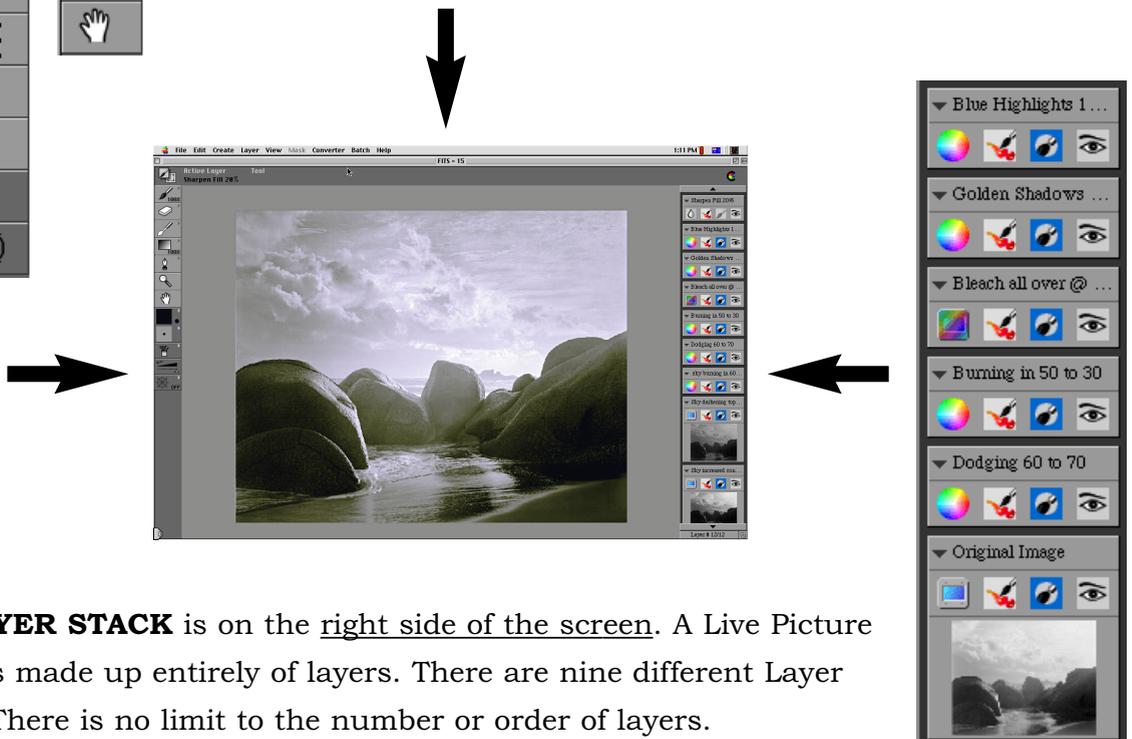Contains tools for moving, re-scaling, cropping, distortion etc of the image.

View Tool Bar

Contains tools for creating and editing VIEWS (of how the image is displayed on screen).

3: The **LAYER STACK** is on the <u>right side of the screen</u>. A Live Picture image is made up entirely of layers. There are nine different Layer Types. There is no limit to the number or order of layers.

File Formats: IVUE and FITS

1: IVUE: This is Live Picture's own file format. You have to initially convert all other file formats to IVUE to use that file (image) in Live Picture.

2: FITS: This is the file format in which your changes (image manipulations) are saved.

3: OUTPUT: Your images can be output (built out) to any standard file format such as TIFF, EPS, Photoshop, etc.

Converting files to the IVUE format

In order to work with an image in Live Picture it must first be converted into Live Picture's propriety IVUE file format.

1. **Retouch** the image in a pixel editing program (like Photoshop) and save as an 8 bit per channel uncompressed TIFF file.

2. **Open** the TIFF file in Live Picture's Menu Bar/Converter Menu.

3. **Save As** as an IVUE file.

4. **Create** a New Document (Cmd N) from the Menu Bar/File Menu.

5. **Create** an Image Insertion Layer (Cmd 4) from the Menu bar/Create Menu.

Alternatively in Mac OS 9 the file can be **exported** directly from Photoshop using Live Picture's IVUE Export plug-in. Make sure the plug-in is installed in Photoshop's Import/Export plug-in folder. IVUE files can also be imported directly into Photoshop via this plug-in for pixel based editing, including the application of Photoshop filters.

Note: While Live Picture has excellent Image Cloning capabilities, it is preferable to initially 'spot' the image in a pixel editing program like Photoshop which (unlike Live Picture) will permanently render such changes in the image.

Positioning Tools

Live Picture's positioning tools facilitate the scaling and positioning of objects within a composite. An object can be an image, a mask, a stencil, a path, a view, an entire layer, or even multiple layers that have been grouped together.

Positioning only applies to objects that have been **selected** (<u>outlined in blue</u> in the layer stack). The positioning tools are:

	Toggle between Creative Tool Bar and Positional Tool Bar
	Scaling Tool: Scales the selected object and/or moves it around the X-Point
	Rotational Tool: Rotates the selected object around the X-Point
	Skew Tool: Skews the selected object around the X-Point
	Perspective Tool: Changes the selected object's perspective
	Cropping Rectangle: Crops the selected image by changing its Stencil
	Positioning Box Tool: Moves the Positioning Box and the selected object
	Zoom Tool: Enlarges or reduces the view
	Pan Tool: Moves the entire composite around the work space
	Vertical Flip Tool: Flips the selected object vertically around the X-Point
	Horizontal Flip Tool: Flips the selected object horizontally around the X-Point

Live Picture scales and positions objects in relation to two points; the **X-Point** and the **Positioning-Box**.

<u>The X-Point</u> is a reference that Live Picture uses for all scaling, rotating, skewing, flipping.

<u>The Positioning-Box</u> is a boundary with small movable squares (handles) along its edges that are used for all scaling, rotating, skewing and flipping. It automatically appears when in the positioning mode.

Positioning Tools
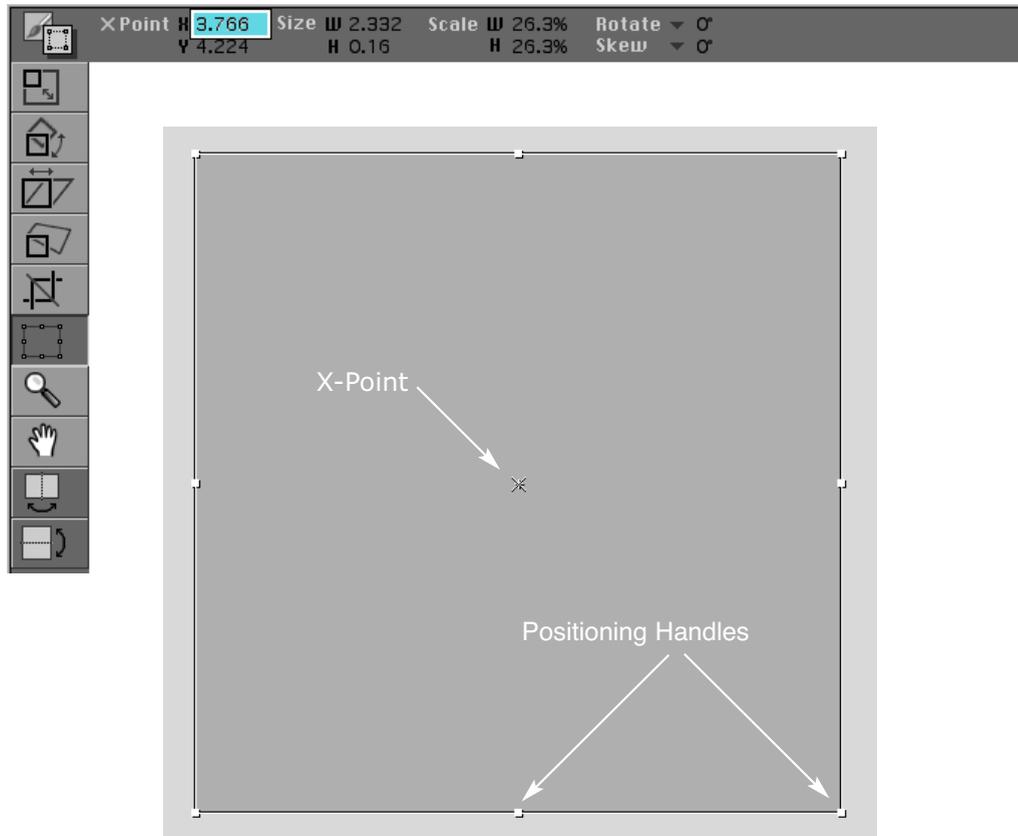
The X-Point defines the only stationary point in an object as it is positioned. The X-point can be placed anywhere within the composite, either by dragging or by co-ordinates. By default the X-Point appears in the centre of the object. Only the cropping and Perspective tools do not make use of the X-Point.

The Positioning-Box can be repositioned anywhere on the desktop by clicking and dragging with any positioning tool.

The Shift Key constrains movement to the horizontal, vertical or diagonal axis.

Option clicking and dragging the Positioning-Box Tool re inserts the selected image at any scale anywhere on the desktop while undoing all previous perspective changes. With any Positioning-Box Tool selected the image can also be nudged one pixel at a time using the arrow keys.

Part 3

Working with Layers

Layer Elements

Each layer includes three basic elements: The Source, Mask and Stencil.

Source ⟷	**Mask** ⟷	**Stencil.**
Mono Colour · Paint	Normal	Normal
Multi Colour · Paint	Hard Edge	Inverted
Colorize · Paint		None
Image Insertion · Image		
Image Distortion · Image		
Sharpen/Blur · Effect		
Colour Correction · Colour		

It is the interaction of these three layer elements that determines the appearance of a layer and defines its interaction with other layers.

The layer panel is used to manipulate layer elements. Each layer element also has a drop down menu in the layer panel listing alternative options. Clicking once on any layer element (icon) selects that element of the layer, so that it can be manipulated independently of any other layer elements. Shift clicking on more than one layer element (and even in more than one layer panel) means all those selected layer elements can be manipulated together but independently of the other non-selected layer elements.

The Source

There are four types of sources in Live Picture: Paint, Image, Effects and Colour. For example the source of a Mono colour Layer is a single paint colour. The source of an Image Layer is an IVUE image. An Effect Layer has a Sharpen and Blur source. The source of a Colour Layer is a colour correction that applies to all underlying layers in the layer stack.

Masks and Stencils

The Mask

The mask is the part of the layer that defines what you see of the source. In other words the mask reveals the source. Image Layers are inserted with a default mask that defines their opacity. All other layers remain transparent until you create a mask. Masks are created and modified using Live Picture's creative tools, for example by brushing in or filling the layer at a certain % opacity. The type of layer you are working in determines the type of mask you create; image, paint, effects or colour correction. Each time you alter an image you alter its mask. As the opacity of the mask increases, so does the visibility of its source. Each point in a mask can have a different opacity. This allows you to blend images with seamless precision. You can modify a mask at any time by activating (double clicking) the layer containing the mask and modifying it by using the creative tools. For example each time you brush in a layer you change its mask. You can also reposition masks at any time by using the positioning tools.

The Stencil

A stencil is an outline that further defines the visible region of the source. A stencil is made up of two parts: an opening, which is cut to your specifications, and a solid area. The solid area blocks out the source it covers so that it doesn't appear in the composite. The opening shows the source. Like masks, stencils are defined by their opacity and can be repositioned at any time by using the positioning tools. A stencil doesn't change the mask, it only reveals the mask in the same way that the mask reveals the source. However unlike masks, stencils once created have their opacity fixed (until they are recreated).

Creating Masks and Stencils

You can create masks and stencils using a variety of methods. The most common method for creating a mask is to use the creative tools or silhouetting tools. The most common methods for creating a stencil is to use either the Crop tool (in the positioning tools) or one of the Path tools, which can then have a variable-opacity (feathered) edge defined. You can also create masks and stencils by copying (option-dragging) them from existing layer elements or from other layers. When you copy a mask (or stencil) from one layer to another, the mask (or stencil) reveals the same area in the new layer. For example, the cropping of an image (it's stencil) can be copied to the stencil of a Colour Correction Layer, thereby constraining the effects of the Colour Correction to the same cropping as in the image.

<u>Image Layers</u>

Of Live Picture's nine layer types, three are 'image layers'

1. Image Insertion Layers
2. Image Distortion Layers
3. Image Silhouette Layers

The Image Insertion Layers and Silhouette Layers excel in the placement, selection and insertion of image elements. The Image Distortion Layer excels in the unlimited and infinitely variable local distortion of an image. In all Layers, the Positional Tool Bar allows the image elements in individual layers to be cropped, moved, rotated, flipped, skewed, enlarged, reduced or in other ways alter their perspective.

Image Insertion Layers
- An Image Insertion Layer allows an image to be inserted at varying levels of opacity.
- It can be locally inserted or erased by brushing in the image.
[a] It can also be inserted with a rectangular Fill Marquee (including horizontal, vertical and four-point gradient fills).

Image Distortion Layers
- Any degree of local or all-over distortion can be obtained.
- The distortion can be equally employed to heighten the realistic portrayal or abstraction of the image.
- It can be used in compositing image elements together, such as in distorting one image to fit into, onto or around another.

Image Silhouette Layers
- Silhouette Layers create Masks that describe the local opacity/density of the image layer. Being a mask, they can be infinitely modified or corrected.
- A Silhouette Layer can 'select' or 'cut out' image elements based on either their Colour or Tonality (Luminosity).
- A Colour Compensation Silhouette selects by colour.
- A Luminance Silhouette selects by tone.

<u>Manipulating Image Layers</u>

- An Image Insertion Layer allows an image to be inserted at varying levels of opacity.

- It can be inserted by locally brushing to what ever density/opacity is desired.

- If required, only part of the image can be brushed in or erased.

- The image can also be globally or partially inserted with a rectangular Fill Marquee (including horizontal, vertical and four-point gradient fills).

- All adjustments in an Image Insertion Layer can be undone or redone to any extent at any time.

- The % opacity settings for the Brush, Eraser and Marquee tools in the Tool Bar represent the maximum opacity obtainable (not the rate of application) at that setting.

- All tools are Pressure Sensitive. The Rate of Application can be further controlled by adjusting the Pressure Control slider in the Tool Bar. The keyboard keys 1 = 10% to 0 = 100% also control the pressure level of the stylus.

- The Image Insertion tools create a variable density/opacity Mask of the inserted image.

- A section of the image can be outlined with the Path Tool.

- The path can then be converted to either a Mask or a Stencil.

- The edge of the Stencil or Mask can be as hard edged or soft edged/diffuse as desired.

- A Mask Icon or Stencil Icon in the Title Bar of a Layer can be selected (clicked once so it is highlighted in red) and Option-Dragged to another Mask or Stencil Icon in any layer, thereby transferring that mask or stencil information to another layer.

- A Stencil can be inverted or turned off altogether by selecting the required option from the drop down sub menu of the Stencil icon in the Title bar of any Layer.

<u>Blending Images</u>

1. Using Image Insertion Layers, images can be inserted both globally and locally to what ever degree (of opacity) is required. Remember an opacity setting (%) in Live Picture represents the maximum level of opacity that can be achieved, rather than its rate of application as in Photoshop.

2. Usually the Inserted Image is placed above the original image (or background image) and inserted by brushing it in at varying opacity. Less than 100% means less than 100% of the (top) image is visible hence the lower image becomes inversely visible. For example if the top image is inserted at 0% opacity then the lower image becomes 100% visible.

3. Rather than brushing the image in, a variable % Gradient Fill can be globally applied to the inserted image (or section of the image). This renders the inserted image (or chosen section) at varying opacity which also inversely reveals the underlying image. The Brush Tool can then be applied at varying opacity to locally reveal (re-insert) or further remove the inserted image. Oscillating between the Brush and Eraser Tools (pressing the Command Key will change the Brush into the Eraser) will enable the top image to be inserted with great precision.

4. If the image is inserted with the Auto Insertion Box unchecked in the Image Insertion Dialogue Window, the image will be inserted with the Positional Tool Bar active, and the overall opacity of the inserted image can then be controlled by the Opacity Slider at the bottom of the Positional Tool Bar. This overall Opacity Slider is only available in the Positional Tool Bar the first time the image is inserted. This is helpful when trying to line-up and scale two images relative to each other. Inserting the second image at 30% to 50% will allow both images to be viewed at the same time, and their relative placement, scale and shape to be adjusted as required. Once their relative positions are correct, they can then be locally re-inserted (with Brush, Eraser and/or Gradient Fill) at their final opacity.

5. Especially detailed work can be achieved with the Eraser Tool at 100% rather than the Brush Tool at 0%. This is because the second set of smaller brushes (the Micro Brushes) are only available with the Eraser Tool or Brush Tool at 100% opacity. Hence erasing the image works just as well as brushing in the image at 0% opacity.

__Blending Image Layers__

Initially insert the image then erase those parts not required. Note that the Micro Brushes also have a harder edged profile compared with the larger softer edged brushes.

6. Remarkable control of an image's local character can be achieved by blending together different renderings of that same image (in terms of colour or contrast or density). Auto insert the same image on different layers, then colour and/or density correct each layer before blending (locally inserting) them as required. Alternatively 'Option Click and Drag' the original image to a new position in the layer stack to duplicate it with perfect registration. This is helpful if you have initially had to use the Positional Tool Bar to modify the image's position or dimensions.

Variable Contrast Printing

Blending together a high contrast and low contrast version of the same image.
- Duplicate the original image.
- Click once on the top version of the image to select it (to highlight it in blue) and then use the Layer/IVUE Correction/Curves to lower its overall contrast.
- Repeat for the other version of the image, but increase its contrast.
- Locally blend the two images together as required.

For example, a landscape image might benefit from variable contrast printing where the contrast of the sky is lowered while the contrast of the land is increased, by variably blending high and low contrast versions of the same image.

The same principle can be applied to create variable local shifts in density, colour and/or saturation in the image. In each case use the Layer/IVUE Correction/"Tools" to change the overall character of each duplicated version of the image, then locally blend the different versions together as required.

For example, the subtle blending of warm tone and cold tone versions of the same portrait can introduce an alternative psychological reading, or different sides of a face can project a different emotion. Blending warm and cold tone versions of an architectural image or a landscape can significantly change its spatial and psychological rendering. The same image photographed at different times of the day can also be blended together.

Editing Tools

There are 5 additional tools of particular use to artists and photographers.

The first two tools are found in the **Menu Bar/Layer/** menu:

1. **IVUE Correction/Levels**   (Global Colour Balance}
2. **IVUE Correction/Curves**   (Global Tonal & Colour Control)

Both of these IVUE Correction tools act globally across the entire IVUE image. The effects can also be locally applied to the image through specific curve adjustments or variable insertion in image insertion layers.

The next three tools are found in the **Menu Bar/Create/** menu:

3. **Colorize Layers**   (Reduction and Intensification)
4. **Colour Correction Layers**   (Tone & Colour Control)
5. **Sharpen/Blur Layers**   (Spatial Relations)

These tools produce changes that are applied locally with a brush or globally with the marquee tool at varying levels of opacity. They are Live Picture's most 'photographic tools' in their effect and feel. Combined with variable image opacity (insertion) they provide a remarkable range of controls for the photographer.

It is important to realise that Live Picture allows any effect to be applied to any degree, anywhere in the image. Most corrections or modifications are made locally with the Brush Tool. The Brushes are pressure sensitive tools that allow incredibly subtle and flexible execution particularly when used with a pressure sensitive stylus and tablet.

Don't forget, an image can be variably inserted (by brush or marquee) to any level of opacity. In this way two or more versions of the same image (lighter or darker, softer or harder, cooler or warmer, etc) can be effortlessly blended together. For example, a lighter lower contrast version and a darker higher contrast version of the same image can be variably blended together giving the photographer complete local control over density and contrast in colour and black & white images.

<u>Colorize Layers</u>

Colorize Layers can be used to alter the hue of an image, and intensify and/or reduce an image, locally or all over. Colorize Layers use the paint brush (or marquee or gradient) in three basic modes:

Paint ⟷ Lighten ⟷ Darken

Lighten <u>increases the highlight contrast</u>. This digital effect is similar to using a subtractive chemical reducer on a silver gelatin print.

Darken <u>increases the shadow contrast</u>. This digital effect is similar to using a Chromium Intensifier on a silver gelatin print.

Paint <u>colorizes</u> (colours) the image with the hue selected in the colour picker.
• Neutral colours (white/grey/black) increase image contrast without changing the hue.
• Painting with white and black produces the same result as Lighten and Darken.

Colorize Layers can also both reduce (Lighten) and intensify (Darken) an image <u>at the same time</u>. This change in contrast can also be pivoted around any desired part of the tonal scale. For example by Painting with 50% grey an image will be equally reduced (Lightened) above middle grey while simultaneously being equally intensified (Darkened) below middle grey. However there is a 'trick' to applying this remarkable effect.

Use the eye dropper to select the 'Pivot Value' in the image. Note this Value (%) then drag the eye dropper along the colour palette's neutral grey scale until the inverse Value (%) is obtained. For example if the desired pivot Value is 20% (Zone II), the actual Value % should be set to 80% (100 – 20). Use the brush or marquee in the Paint mode to then reduce (Lighten) all values above 20%, and intensify (Darken) all values below 20%. The contrast changes will be either side of the Pivot Value of 20% while it remains unchanged.

The gradient tool can also be used to create complex reduction and intensification (contrast) transitions. Use the eye dropper to select the Pivot Value, then choose its inverse value from the colour picker's grey scale and set it in the colour picker. This procedure will need to be repeated to set each point in a complex gradient.

If the selected hue is almost but not exactly neutral (for example 127R 127G 132B) the reduction and intensification will take on a slight (blue) hue. This is a wonderful way to gently tone (colour) the print while increasing its contrast.

Color Correction Layers

Almost any effect can be created via a Colour Correction layer. A selected input value is modified and then locally and/or globally applied to the image at varying opacity.
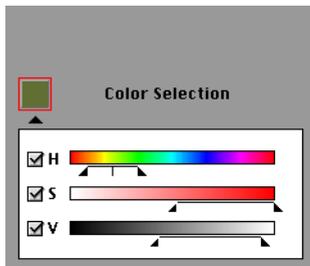
The input value can be selected on any range of hue, saturation and brightness, while the output value can be adjusted by hue, saturation, brightness, or by RGB or CMYK values.
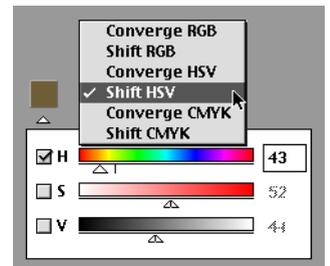
Example 1:

An image has a localised green colour cast. Sample this area with the input colour eye-dropper (drag from the input colour swatch) and define its input hue and/or saturation and/or brightness range. Choose Shift CMYK as the output mode and adjust the magenta (minus green) output values to darken and colour correct the cast, or choose Shift RGB and adjust the green output values to lighten and colour correct the cast. The locally brush in these corrections at varying levels of opacity to correct the image.
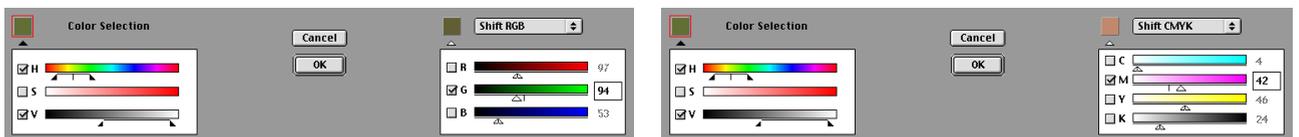
Example 2:

An image is colour balanced but lacks luminosity. Add a colour correction layer and sample the mid tones with the input colour eye dropper, defining only its input Brightness range, say approximately zone IV to VI. Choose Shift HSV as the output mode and increase brightness by 10%. This will automatically raise all tones in the selected input range one zone. Then locally (or globally) paint this effect into the image.

All sliders are interactive with the results clearer visible in the before an after dialogues.

Split Toning

1. Open a Colour Correction Layer.

2. Use the Eye Dropper from the 'HSV Select' colour selection box to select the zone to be toned (coloured).

3. Adjust the "V" (brightness) tolerance sliders around the selected zone to encompass as wide or narrow a range of tones as required.

4. Use the 'RGB Shift' sliders (in the After Box) to produce subtle colouration shifts.

5. Then use a global fill to insert these values into the image at the required intensity. This can also be modified locally with a brush.

6. Repeat this procedure with another one or two Colour Correction Layers for other parts of the tonal scale (for example one layer for the shadows (II to IV), one for the mid-tones (VI to VI) and another for the highlights (VII to VIII).

7. When this is done subtly the results are magnificent. Certainly much better than what can be achieved with curves. The colours are cleaner and better separated and are more easily controlled. There is no direct equivalent to this technique in Photoshop.

<u>Balancing a Photographic Image</u>

1. <u>Open</u> a retouched and uncompressed 8 bit per channel TIFF file in Live Picture's **Menu Bar/Converter** Menu and then <u>Save As</u> in the **IVUE File Format**.

2. <u>Create</u> a **NEW** workspace from the **Menu Bar/Create** Menu.

3. <u>Create</u> an **Image Insertion Layer** (Cmd 4) from the **Menu Bar/Create** Menu with the IVUE file you wish to work on.

4. <u>Adjust the white (highlight) and black (shadow) sliders</u> in **Menu Bar/Layer/IVUE Correction/Levels** for each RGB channel to correct the density of the image.

5. <u>Adjust the Gamma slider</u> in **Menu Bar/Layer/IVUE Correction/Levels** for one or more channels to modify the image's overall colour balance as required.

6. <u>Add Colour Correction Layers</u> (Cmd 9) from **Menu Bar/Create Menu** to further control the hue, contrast and saturation. Use a marquee to globally apply the changes or locally brush in the changes to any level of opacity as required. Use any number of Colour Correction Layers to adjust any number of different image elements.

7. <u>Add Colorize Layers</u> (Cmd 3) from **Menu Bar/Create Menu** to intensify and/or reduce the image to locally tension the tonal and colour composition.

8. <u>Add Sharpen (& Blur) Layers</u> (Cmd 8) from **Menu Bar/Create** Menu to control local spatial relationships within the image. Subtle sharpening in single RGB layers can have a very significant effect on the "colour luminosity" of the image.

9. <u>Variably Insert duplicate layers</u> of the same image into one another to further blend local variations in contrast, hue, saturation, and density.

10. <u>Save the changes as a FITS file</u>. The same FITS file can be used to **File/Build** out different print sizes/resolutions of the same image with minimal loss of quality. Different **Views** can also be created to build out different cropped versions of the same FITS file. <u>Build</u> with **Anti Aliasing** if the images are at resolutions greater than 100%.

Part 4

Compositing Images

Silhouette Layers

- **Silhouette Layers** create **Masks** that describe the local opacity/density of the image in that layer.

- A Silhouette Layer renders image Masks according to the **precision** of the photographic image itself.

- This makes a Silhouette Layer an extremely powerful tool for the critical selection of image elements to be included in composite images.

- A Silhouette Layer 'selects' image elements based on either their **Colour** or **Tonality**.

- **A Colour Compensation Mask** most accurately selects coloured image elements.

- **A Luminance Mask** most accurately selects image elements based on their tone.

- Once silhouetted the layer becomes a normal <u>Image Insertion Layer</u>.

- Silhouette Layers are often used when the local insertion of an image is either too complex, too difficult, or too time consuming to accomplish with the Brushes, Eraser and Marquee tool in an Image Insertion Layer.

- Silhouette Layers can be <u>retouched or redone</u> to any extent required.

- Silhouetted Images can be built out (using their Mask as an **Alpha Channel**) and then reinserted into another Image Silhouette Layer to further refine the selection or blending of individual image elements.

- The selected **Mask Icon** in the **Title Bar** of a Colour Compensation Mask or Luminance Mask Layer can be <u>selected</u> (clicked once to highlight in red) and then **Option-Dragged onto the Stencil Icon** of <u>any other Layer</u>.

- This will then allow that Layer to be variably inserted only within the boundary of the Stencil.

<u>Luminance Masks</u>

A **Luminance Mask** will isolate selected areas of the image based on their selected tonal values so that they can be individually controlled and/or composited. In the Preview Mode the luminance histogram graphically represents the distribution of pixels in the image according to their tonal values. The histogram's Black Slider represents the Black Point in the Mask, and the White Slider represents the White Point in the Mask. The Black and White Points can be set anywhere within the Histogram.
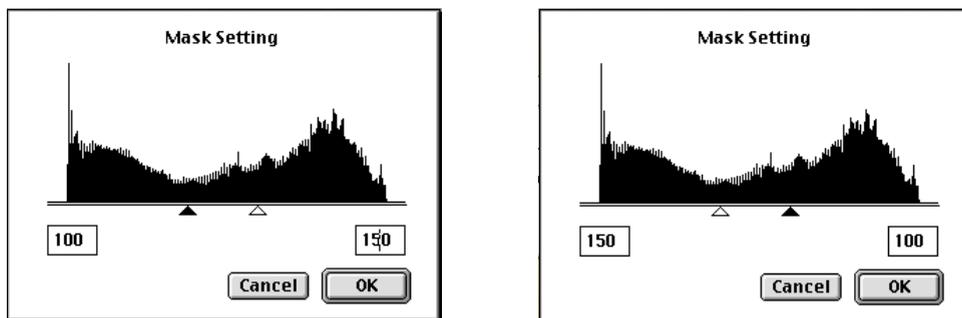
In the resulting Luminance Mask everything between the Black Point and its end of the Histogram is not visible in the Mask, while everything between the White Point and its end of the Histogram is visible in the Luminance Mask.

The distance between the Black and White Points represents the transition in the Luminance Mask between what is not visible and what is visible. The further apart the Black and White Points are, the more gradual the transition between what is visible and invisible in the Mask.

The White Slider can also be placed on top of the Black slider creating an instant transition between what is visible and not visible in the mask. Usually some degree of transition is desirable to allow the masked areas to be 'seamlessly' incorporated back into a composite without looking as if they have been 'cut out'.

The White and Black Points can also be set numerically. The 256 levels between Black (0) and White (255) can be represented as a Zone System of ten equal zones approximately 25 levels apart.This makes settings for the White and Black Points very easy to calculate. For example Zone III = 75 levels (3 X 25), Zone VII = 175 levels (7 X 25) etc. Use the colour picker to locate precise the tonal values in the image that need to be masked out.

Color Compensating Masks

A Silhouette Layer Mask will be based on the colour differences in the image when the Colour Compensation Mask mode is chosen in the Silhouette Layer dialogue box.

Select the Brush Tool (and the Auto setting from its sub menu) with a Silhouette Tolerance on the menu bar of around 40%. To select an area as 'outside' or 'inside' first select (click on) the appropriate box in the menu bar. The selected box is outlined in red.

Click and drag (over the values to be included in the mask. Holding down the shift key will add values to those already selected. Choose which half of the mask (inside or outside) to first select according to which area has the more uniform colour range. Change the tolerance settings if required and keep auto-choosing until the inside (or outside) area is relatively complete. The opposite half (outside or inside) of the mask can then be easily selected by dragging a 100% Gradient Fill over the image.

Create the silhouette by clicking on the Compute button (Scissors Icon on the Menu Bar). Initially apply the default settings in the dialogue window (i.e.. a Colour Compensating Mask with a tolerance setting of 20 pixels gives a very realistic edge transition).

Use the Eraser tool with the remove setting to retouch ('clean up') both the inside and outside silhouette areas. Make sure the correct colour box on the menu bar is selected (outlined in red) before trying to retouch that area.

Complex edge transitions can be handled by using a Brush at the Selective Setting (from the Brush sub menu). Drag the brush around the desired silhouette-boundary varying tolerance levels (and/or by Option Clicking to select the inside/outside values) as required. Then use the Auto Brush to complete the silhouette.

Alternatively use the Silhouette Layer to compute a mask that is further refined at a higher level of magnification with the Brush Tool. i.e.. Once the mask has been computed the Image Silhouette Layer becomes an ordinary Image Insertion Layer. Option Clicking in the image with the Brush Tool's Outline Option (chosen from the Brush sub menu), automatically creates or refines the silhouette based on locally selected (Option Clicked) inside/outside colours.

Part 5

Paths and Alpha Channel Masking

Path Tools

Live Picture's Path Tools are made up of:

Live Picture 2.5.1

Selection Tool
Pen Tool
Freehand Tool
Scissors Tool
Oval and Rectangle Tools
Type Tool

Live Picture 2.6.2

Selection Tool
Pen Tool
Freehand Tool
Scissors Tool
Oval and Rectangle Tools
Type Tool
Magic Marker Tool
Add Tool
Subtract Tool
Corner Tool
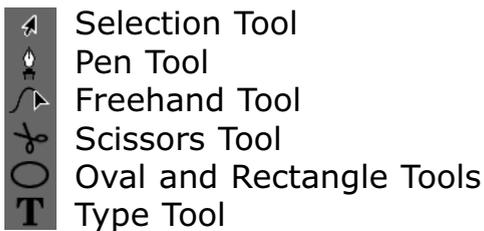
1. The Path Tools allow you to hand draw a path within an image.

2. The path may or may not follow the contours of the image.

3. The Path Tools provide an alternative masking method to a variable Image Insertion Layer or a Silhouette Layer.

4. Paths can be individually selected, all selected or hidden, inverted, brushed along/out-lined, continually modified, grouped together, and converted to Masks or Stencils.

5. Paths can be converted to Stencils in all layers.

6. Paths can be converted to Masks in all layers in version 2.6.2, but only in Mono colour, Artwork, Image Insertion and Colour Correction layers in version 2.5.1.

7. Some of the additional path tools in version 2.6.2 can be duplicated with short cuts in version 2.5.1. For example option clicking on a path with the 2.5.1 Scissors Tool adds a new anchor point, and control clicking on an   anchor point with the 2.5.1 Selection Tool, turns it into a corner point.

8. The key to making usable paths is to make a closed path by re-clicking on the first anchor point to complete the path.

<u>Creating Paths</u>

- Paths can be created by clicking individual anchor points around a perimeter.

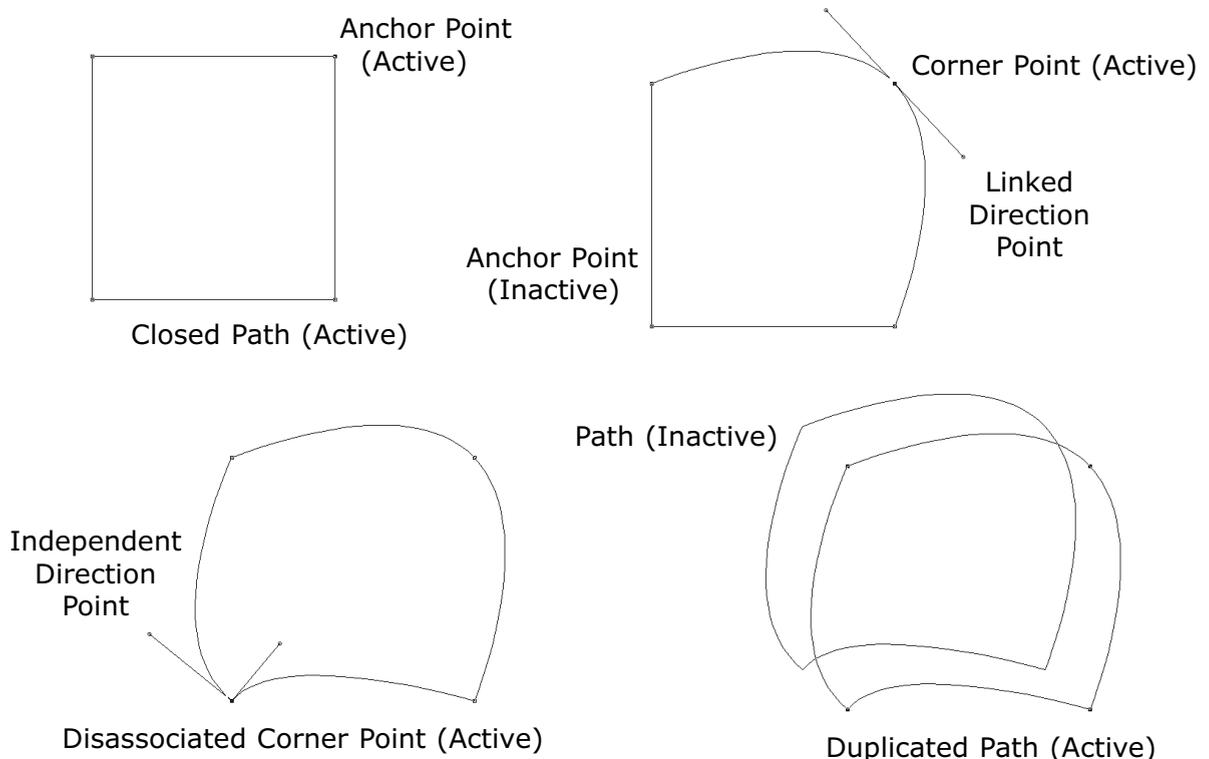- Clicking and dragging with the Pen Tool will automatically drag out a direction line through the anchor point and turn it into a corner point. Each end of the direction line is terminated with a direction point.

- A direction point allows the length of the direction line to be altered, and for the direction lines to be moved. Clicking on a direction point and dragging out its direction line modifies the shape (curve) of the path.

- Use the Corner Tool to click on an anchor point to toggle it between a corner point (directional anchor point) and an anchor point.

- Click the Selection Tool on an anchor point to activate it (and any directional points). Active anchor points can be modified. Shift clicking will activate additional anchor points and allow them to be all modified together.

- Use the Selection Tool to click (activate) and drag an anchor point or direction point.

- Activating an anchor point by clicking on it with the Selection Tool then pressing the Delete Key will remove the anchor point and the line segments immediately above and below it from the path.

- Alternatively use the Plus and Minus Pen Tools in 2.6.2 to add or remove anchor points and hence modify the path.

- On the other hand the Scissors Tool removes anchor points but leaves the original path without modification.

- With the Selection Tool drag out a rectangle crossing over a path to select it (make it active). The rectangle doesn't have to contain the whole path to select/activate all of the path.

- The Freehand Tool allows you to draw freely around an object while automatically inserting the anchor points for you.

- The Text Tool inserts text into a layer as a complex path that can then be converted to a mask or a stencil (Mask/Path --> Stencil or Path -->Mask) as required.

- The Oval and Rectangle Tools allow you to easily create Oval and Rectangle paths. Holding down the Shift Key will constrain them to Circles and Squares.

- The Magic Marker Tool (LP 2.6) automatically creates a path around selected edges.

<u>Path Shortcuts</u>

- Selecting anchor points with the Selection Tool allows those selected points to be moved. Selecting all anchor points in a path allows the entire path to be moved.

- Option dragging a selected path with the Selection Tool duplicates the path.

- With either of the three pen tools (normal, add, subtract) holding down the Command Key will turn them into the selection tool.

- Command Key/Pen Tool clicking on a direction point will toggle it between a linked or independent direction point.

- Control clicking on a direction point will also toggle it between a linked or independent direction point.

- Holding down the Command and Control Keys will turn a pen tool into the corner tool.

- Alternatively Control clicking with the Selection Tool on an anchor point will toggle it between a corner point and an anchor point.

Anchor Point
(Active)

Corner Point (Active)

Linked
Direction
Point

Anchor Point
(Inactive)

Closed Path (Active)

Path (Inactive)

Independent
Direction
Point

Disassociated Corner Point (Active)

Duplicated Path (Active)

Edge Burning

1. Duplicate the original Image Insertion Layer by first selecting the layer (click once to put a blue outline around the layer) and then Option Drag the layer to duplicate it in the Layer Palette. Rename the original image layer (eg. 'Stencil') to distinguish it from the lower duplicate image layer.

2. Click once on the on the 'Stencil' layer to active it (signified by a blue outline) and choose the Oval Path Tool from the Paths menu in the Creative Tool Palette.

3. Draw out an oval path. (Holding down the Shift Key constrains the path to a circle).

4. Choose the Selection Tool from the Paths menu (or hold down the Command Key with the Oval Tool) and click on one of the path Anchor Points and drag it to an appropriate centred location within the image.

5. From the Mask menu on the Menu Bar choose Path to Stencil.

6. Set the Feathering somewhere between Medium and High as appropriate.

8. This removes the outer area of the 'Stencil' image layer.

9. Click once on the lower duplicated Image Layer to select it (signified by a blue outline in the Layer Palette) and use the Gamma Slider in Layer/IVUE Correction/Levels to darken this lower image layer as required.

10. Click the preview box in Layer/IVUE Correction/Levels to be able to judge the required degree of the edge burning in the composite image. Click OK to accept the changes. This produces the desired degree of edge burning.

11. A Colour Correction Layer can also be used to lower the edge contrast and thereby further increase the central image luminosity. This effect is similar to local pre-exposure in analogue printing. Create a Colour Correction Layer between the two image layers, immediately above the lower duplicate Image Layer. Select the highlights in the Colour Correction Layer and reduce their tonality (V) by 10%. Apply this Colour Correction effect with a global fill up to 100%.

12. Alternatively edge gradients (or four quadrant gradients) can be created in a Colorize or Colour Correction Layer. For example graduating from 10% to 0% will create a 10% 'edge burn' across the width of the gradient. In this way variable colour gradients can also be used to create colour corrected edge burning.

<u>Compositing with Alpha Channels</u>

Compositing in Live Picture

In a Live Picture document individual Image Layers can be used to composite any image element or object into a final image.

Image elements can be:

• Locally and variably inserted (brushed in) into any Layer.

• Automatically selected (cut out) in Image Silhouette Layers based on either:
   • Tonal differences (Luminance Masks) or
   • Colour differences (Colour Compensating Masks).

• Cut out of any Layer using the Path Tools and then converted into a Stencil or a Mask.

Alpha Channels

In Photoshop, masks (and selections) are stored as alpha channels. In Live Picture every layer is defined by a mask and a stencil. Therefore Alpha Channels in Live Picture have a special meaning that describe something different to either a mask or a stencil. Their effects however are similar to alpha channels in Photoshop.

Alpha channels also provide another powerful feature in Live Picture that enable locally selected objects to be built out as a new IVUE image without any background showing. This means that JUST the object that has been masked or stencilled out of its original background can be built out as an IVUE image to be inserted into another document.

This use of Alpha Channels allows the incorporation of the effects of more than one Image Layer (Image Insertion or Distortion or Silhouette) in another Image Layer (Image Insertion or Distortion or Silhouette). This is particularly helpful in a creating complex composite images.

<u>Compositing with Alpha Channels</u>

An example of complex composites is where the selected object(s) is a complex shape and the usual variable brush insertion technique in an Image Layer is not accurate enough, or is too time consuming or difficult to do. You then might choose to use an Image Silhouette Layer to quickly and automatically select the object. However if you also want to distort this selected object you only have the Positional Tools to do this in the Image Silhouette Layer. They are helpful but can only to change the relative scale and perspective of the object. They can't for example do any local freehand distortion in the Image Silhouette Layer. This facility is only available in an Image Distortion Layer.

The problem is that if you build the Image Silhouette Layer as a new IVUE image (to then reinsert as an Image Distortion Layer) you have to build from a view. You always build from a view. Views are also rectangular and always include the Background Layer in the Layer Stack (because the Background Layer can't be turned off). A beautifully silhouetted object would be built out as well as the Background Layer, hence when it is reinserted in an Image Distortion Layer, the Background Layer would also be visible.

What is required is to be able to build without including the Background Layer, so that only the selected image objects are included in the new IVUE image. The solution is to use the Image Layer containing the selected object(s) as an Alpha Channel. This is very easy to do.

Including Alpha Channels in a Layer

Any type of layer can be used as an Alpha Channel. Mono colour Layers, Image Layers, Colour Correction Layers etc can all be used as Alpha Channels. Select the Layer you want to use (click once on the Layer in the Layer Stack so that it is outlined in blue = selected) then choose Mask/Use as an Alpha Channel from the Mask submenu on the Menu bar.

Note that this shades the selected layer in 50% red in the Layer Stack, indicating that this Layer is now being used as an Alpha Channel.

It is important to understand that when you define a Layer as an Alpha Channel, you are turning whatever is VISIBLE ON THE SCREEN FOR THAT LAYER (including the effects of that Layer's Stencil and Mask) into an Alpha Channel. Therefore what is made visible by the Stencil and Mask is all that will be built out as a new IVUE image.

<u>Compositing with Alpha Channels</u>

Building the Alpha Channel as a New IVUE Image

When you build a Layer that includes an Alpha Channel as a new IVUE image (incorporating the Alpha Channel) you must remember to check the Include Alpha Channel box in the Build Dialogue. Also notice in the Save Dialogue that requests the name and destination for this new IVUE image file, that the Include Alpha Channel box is automatically checked. Apart from this the build process is no different to a normal build.

Inserting an IVUE Image with an Alpha Channel

Any image that includes an Alpha Channel can be inserted into any Image Layer.

When you insert an IVUE image containing an Alpha Channel, the preview in both the Preview Image in the Layer Stack and the Open Dialogue highlight the missing background in bright red. The outer boundary of this red area is defined by the rectangular dimensions of the view that was used for the image build.

An Example Illustrating this use of an Alphe Channel

Problem: How can an image be distorted so that it appears to conform to the contours of another image? For example to bend text so that it appears to wrap around the surface of another object?

Such manipulation of individual image elements is very easy to control in Live Picture. Complex composites usually require the task to be broken down into several steps, and this may involve one or more intermediate builds.

The wrapping of cut out text around the surface of another object is a simple illustration of this process. It requires three stages, with intermediate builds of new IVUE image files at the end of the first and second stages.

<u>Working with Alpha Channels</u>

Stage One

1. CREATE a mono colour layer.
2. FILL a rectangular area with colour.
3. Use the TYPE TOOL to create the required text.
4. CONVERT the text Path to a hard edge stencil (Mask/Path Æ Stencil).
5. BUILD out the image to the desired size and resolution as an IVUE file.

Stage Two

1. CREATE a new document.
2. INSERT the 'text' IVUE file into a Silhouette Layer.
3. Choose the text as the INSIDE AREA. Fill the rest of the image as the OUTSIDE AREA.
4. COMPUTE the layer as a Colour Compensation Mask with a hard edge. (This will cut the image out of its background).
5. Change this Mask to a ALPHA CHANNEL by using the Mask/Use as Alpha Channel command. (Note that this layer will now be shaded in 50% red in the Layer Stack, identifying it as an Alpha Channel).
6. BUILD this image out as an IVUE file. In the Build Dialogue make sure you check the Include Alpha Channel box.
7. SAVE this file Including the Alpha Channel.

Stage Three

1. CREATE a new document.
2. INSERT the text image containing the Alpha Channel as a Distortion Layer.
3. INSERT the image of the object or surface that you want to wrap the text around. Position this image insertion layer below the alpha channel text layer.
4. ACTIVATE the Distortion Layer and use the paint brush to locally distort (and insert) the image as required, wrapping it around the object.

Importing Images with Alpha Channels

An Alpha Channel is a pixel based mask.

An image containing an Alpha Channel created in another program (such as Photoshop) can be used in Live Picture. The image can be imported into any of the three Image Layers. (Image Insertion Layer, Image Distortion Layer, or Image Silhouette Layer).

In Image Insertion and Distortion Layers the Alpha Channel acts as another stencil through which the image is displayed. In an Image Silhouette Layer the Alpha Channel (pixel based mask) can also be converted into a resolution independent mask, which in turn can be converted into a path, or a stencil.

1. First convert the image to the IVUE file format. In the Save As dialogue make sure to check the Include Alpha Channel box. (This box will be ghosted if the original image doesn't contain an alpha channel).

2. Insert the image in an image layer. In the Open Image dialogue make sure the Use Alpha Channel box is checked. (The alpha channel then appears red in the preview area of the Layer Stack).

3. When an image is inserted in an image layer, it is displayed through its alpha channel. The alpha channel can be turned off or on by clicking on the Source Icon and dragging between its Image and Alpha Channel icons. (The Source Icon is the first icon of the four icons along the top of each layer bar in the layer stack. The icons from left to right are: Source Icon, Mask Icon, Stencil Icon, & Visibility Icon).

4. In Image Insertion and Image Distortion Layers any modifications brushed into the image are displayed through the alpha channel. The alpha channel acts as another stencil.

5. In a Silhouette Layer, insert the image then click the Scissors Icon (on the Active Layer Menu Bar) to bring up the Compute Mask Options dialogue. In the Computing Mode box select Alpha Channel (rather than Standard, Colour Compensating, or Luminance modes).

6. Click the Compute Button to bring up a Mask Setting histogram, set the white and black points, then click OK. (This works the same way as with a Luminance Mask. Any value between the white (highlight) point and the end of the histogram will be visible, while anything between the black (shadow) point and the other end of the histogram will be invisible. The distance between the white and back points represents the transition between what will be visible and invisible).

7. Compute the silhouette to turn the Alpha Channel into a resolution independent mask. This can then be converted into a path, which can also be converted back into a mask or a stencil.

Part 6

Colour Management

<u>Working with ICC Profiles</u>

Live Picture uses Apple ColorSync to manage colour and consists of two procedures:

• Assigning Reference, Monitor and Output Profiles

• Soft proofing the Monitor and/or Output Profiles.

Assigning an RGB Reference Profile

The Live Picture **Menu Bar/Edit/Preferences/ColorSync** dialogue allows a **Reference** (<u>Source</u>) profile and **Monitor** (<u>Destination</u>) and **Output** (<u>Destination</u>) profiles, to be selected. These preferences will over ride the 'system settings' in the Apple ColorSync control panel (if they are different).
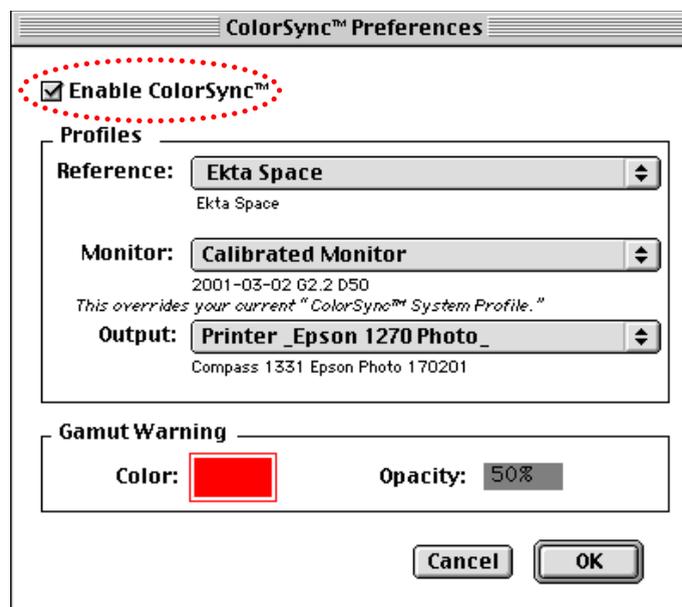
The **Reference** profile represents the colour gamut that the image (colour numbers) will be mapped into, and the gamut in which the image is edited, saved and archived. If the colour gamut of an image is unknown, different Reference profiles can be selected (in ColorSync Preferences) and soft proofed via **Menu Bar/View/Display Matching,** until the best screen rendering is obtained.

Live Picture will allow a scanner or digital camera profile to be used as the Reference profile, so that an image only needs to be converted once from a capture gamut to an output gamut. This will further minimise the possibility of image degradation at the output stage. Live Picture can output to any profile. However Live Picture does not embed or read embedded profiles, so images must be manually colour managed in any creative workflow.

Proofing

Enabling ColorSync in Live Picture's **ColorSync Preferences** enables Live Picture's soft proofing facility. There are three soft proofing options available under the **View Menu**.

Display Matching ⟷ **Soft Proofing** ⟷ **Gamut Warning**
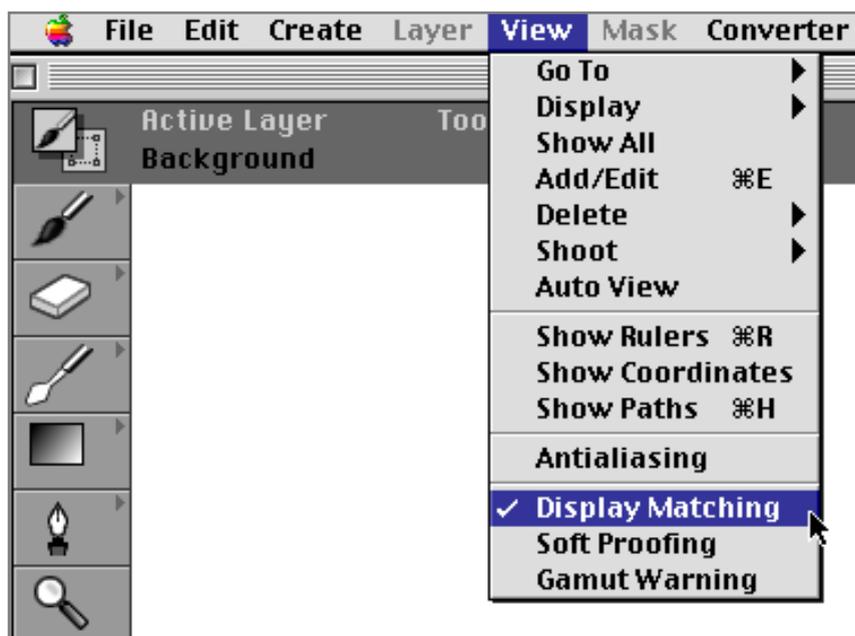
Display Matching
This setting converts the image from the **Reference** (Source) profile to the **Monitor** (Destination) profile, thereby accurately representing the image on the monitor. However Display Matching is only as accurate as the accuracy of the monitor calibration & profile.

Soft Proofing
This setting first converts the image from the **Reference** (Source) profile to the **Output** profile of the printer, and then to the **Monitor** profile, in order to accurately display the image as a virtual print (soft proof) on the monitor. However unless the monitor calibration & profile accurately reproduces the colour (white point) and brightness of the printing paper, it will not be an accurate soft proof. The viewing conditions around the monitor, including the colour scheme, and the brightness, colour temperature and colour spectrum of the viewing light, will also effect the accuracy of the soft proof.

Gamut Warning
This setting will overlay on the screen a uniform colour/tone (50% red by default) identifying those colours (if any) in the **Reference** gamut that are outside of the **Output** gamut.

The ColorSync Workflow

A typical ColorSync managed digital photography workflow might look like this:

```
┌─────────────────────────┐              ┌─────────────────────────┐
│ SCANNING:               │              │ SPOTTING:               │
│ Either scan directly    │   ────────▶  │ Apply the Dust and      │
│ into Photoshop and your │              │ Scratches filter to a   │
│ RGB Working Space, OR   │              │ duplicate layer with    │
│ Batch process scans     │              │ darken and/or lighten   │
│ from your Scanner       │              │ blending.               │
│ Profile to your RGB     │              └─────────────────────────┘
│ Working Space.          │                          │
└─────────────────────────┘                          ▼
                                         ┌─────────────────────────┐
          ┌─────────────────────────┐    │ CONVERT TO IVUE:        │
          │ DIGITAL CAMERA:         │    │ Either Export to IVUE   │
          │ Import and Batch        │──▶ │ from Photoshop, OR      │
          │ process files in        │    │ Open and Save As an     │
          │ Photoshop from your     │    │ IVUE file in Live       │
          │ Camera Profile to your  │    │ Picture.                │
          │ RGB Working Space.      │    └─────────────────────────┘
          └─────────────────────────┘                │
                                                      ▼
┌─────────────────────────┐              ┌─────────────────────────┐
│ OUTPUT:                 │              │ EDIT:                   │
│ Convert in Photoshop    │◀─  ────  ◀── │ Edit & Soft Proof the   │
│ from the RGB Working    │              │ image in Live Picture,  │
│ Space to the (Output)   │  ┌────────┐  │ with Levels, Curves and │
│ Printer Profile, and    │  │EXPORT: │  │ Colorize, Sharpen and   │
│ send to the printer.    │  │Build   │  │ Colour Correction       │
└─────────────────────────┘  │out from│  │ Layers.                 │
                             │Live    │  └─────────────────────────┘
                             │Picture │
                             │as a    │
                             │TIFF    │
                             │file at │
                             │the     │
                             │required│
                             │size &  │
                             │resolu- │
                             │tion.   │
                             └────────┘
```
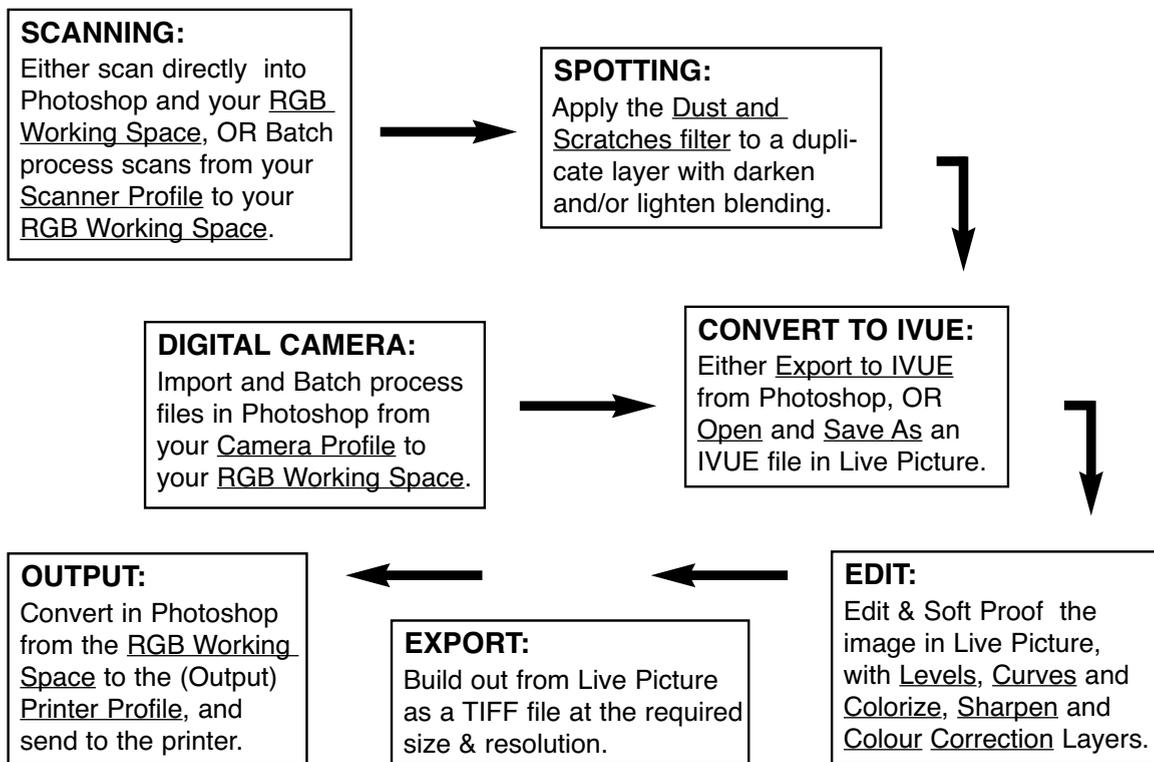
What Live Picture Doesn't do

Live Picture does not 'see' embedded profiles in image files, nor does it embed profiles in IVUE files or in images built out from Live Picture. FITS files also do not save Live Picture's ColorSync Preference settings. Therefore this information has to be consciously included in any Live Picture workflow.

Live Picture also does not provide the facility to select rendering intents in soft proofing or in the build menu. Instead Live Picture applies the profile's default Perceptual rendering intent (which is embedded in the profile during its creation). Special profile viewing software such as ColorThink (www.chromix.com) is required to read and change the profile's default intent. However Live Picture will always apply a Perceptual rendering intent.

However this does not effect Live Picture's ability to accurately colour manage images, it just means that colour has to be manually managed in any Live Picture workflow.

Part 7

Building Images

Creating New Images

Saving a FITS file only saves an instruction set describing the edits applied to the image(s). The original(s) remain unchanged and no new image is saved. However the FITS file can also be used to Build (render out) a new file. Image builds are always constrained to a specific View. If there is no View saved in a FITS file, no build can take place. Numerous builds of different file sizes from numerous views are possible from the one FITS file. The Build dialogue is located in the File menu.
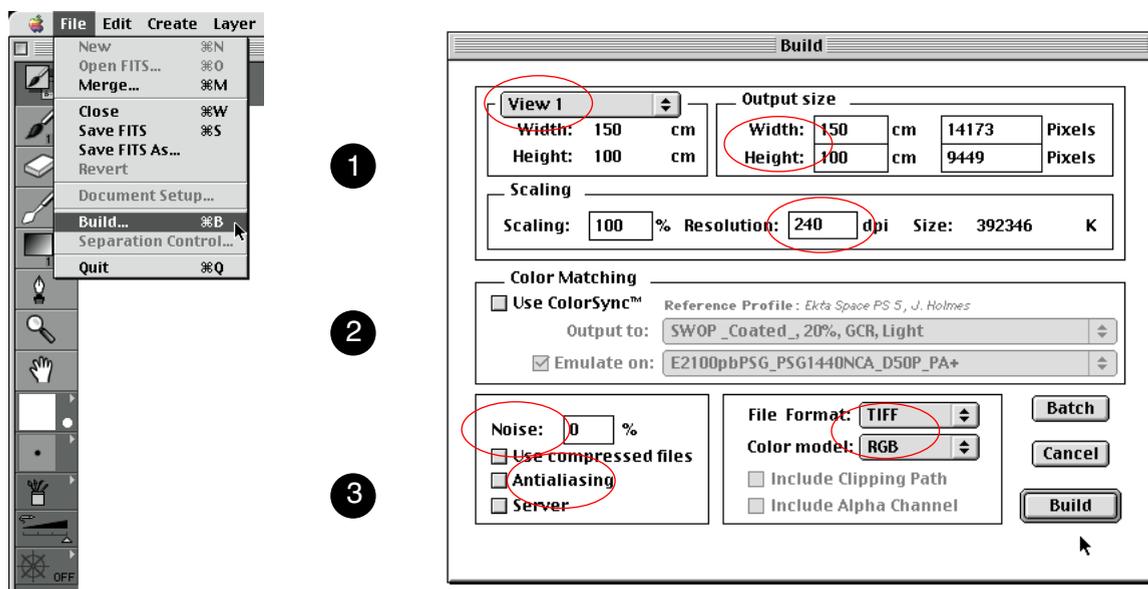
To Build a new image from Live Picture

1. Select the <u>View</u> to build from and set <u>Dimensions</u> and/or <u>Scaling</u> and <u>Resolution</u>.
2. **If required** select <u>Colour Matching</u> and <u>Emulate</u> (locally) an off-site <u>Output</u> (printer).
3. Select <u>Anti-Aliasing</u> and/or <u>Noise</u> as required and <u>File Format</u> and <u>Colour Model</u>.

In practice the best image quality results from down sampling large original IVUE files. Live Picture resizes images with nearest neighbour interpolation, or when Anti-Aliasing is selected, bilinear interpolation. If the FITS file combines images with different resolutions and/or scaling, use Anti-Aliasing to 'reduce' these differences. A small amount of noise is always added to a build even when set to 0%. This contributes to the smooth gradients that characterise Live Picture. Multiple builds can also be Batch processed. In general build without Color Matching and then Assign the correct working space in Photoshop.

Bibliography

Karson, Josh (1996) *Live Picture Revealed,* Hayden Books, Indiana
(Out of print but usually available second hand from http://www.amazon.com)

_____ (1997) *An Introduction to Live Picture - The Student Guide,* Live Picture Inc.

_____ (1997) *Live Picture Coming Up to Speed,* A 90 Minute Training Video
(These last two items are very difficult to find)

Discussion Group

The Live Picture Discussion Group archive is at:
http://mail.idnet.net.uk:81/lpgroup/   *(viewed February 2005)*
In particular read everything by Joseph Holmes, Albert Edgar and Grant Symons.

Live Picture Discussion Group Instructions:
http://www.calverley.co.uk/LP-GROUP/   *(viewed February 2005)*

Purchasing Live Picture

Sealed copies of Live Picture 2.6 regularly appear on eBay.
http://www.ebay.com/
As of February 2005, Live Picture remains very stable in Classic under Mac OS 10.3.7

Software Updates

Live Picture Software Updates:
http://www.calverley.co.uk/LP-GROUP/downloads.html   *(viewed February 2005)*
The preferred versions of Live Picture are 2.5.1 (fastest) and 2.6.2 (most features).