The Image Mode Commands

When the Mode button is disabled, Visual Image changes to Image Mode, and the Command Bar updates to display set of image manipulation buttons.

Figure 216. The Image Mode Commands

When you change to the Image Mode the viewport updates to display a single image. If you were working previously in the Object Mode, the image that is displayed here is the object that was current at the time you pressed the button.

When in the Image Mode you can:

- Use the button to create a new image
- Use the button to load images and projects
- Use the button to save images or projects
- Use the button to manage images in the resource list
- Use the button to paint shapes on an image
- Use the button to process and manipulate an image
- Use the button to recolor an image
- Use the button to print an image

Remember that you can only display and manipulate one image at a time in the Image Mode. To make an image the "current" image for manipulation, point to that image in the Resource List and select. The "active" image is displayed in the Active Resource Well.

Generating a New Image

Select this button on the Command Bar to display a list of image creation commands. Whenever you create a new image with one of these commands, that image is displayed in the viewport, replacing any image that may already be displayed.

Images created here are not displayed as part of the scene in the viewport when you are working in the Object Mode. To add an image to the scene, select the Mode button to change to the Object Mode, the select on the desired image in the Resource List to add it to the scene as an object.

Note that after you create a new image you should save that image to disk using the button on the Command Bar if you wish to use that image in subsequent work.

Generate a New Image with a Solid Color Background

Select this command to create a solid color background. When you select this command, a menu appears on which you can determine the resolution and color of the background.

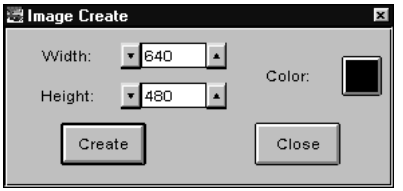

Figure 217. Use the button to create a solid color image

The **Width** and **Height** type-ins allow you to enter the horizontal and vertical resolution of the background. Select in the **Color** box to display a Color Palette from which you can choose the desired background color.

Press **Apply** to complete the command and generate an image in the selected color and resolution. This image is displayed in the viewport and on the Resource List. Press **Close** to exit this window.

Grab a Rectangle from the Screen

Use this button to grab a rectangular section of your screen. You can indicate any area on or off the Visual Image window, an perform a "screen capture" of that area.

Select this button, then drag the pointer to create a rectangular bounding box anywhere on the screen. When you release the mouse button an image is created, copying everything that was enclosed in the bounding box. This new image is now displayed in the viewport and in the Resource List.

Copy an Existing Image

Copy the image that is currently displayed in the viewport. As soon as you select this command a copy of the current image is created and added to the Resource List.

Loading Images

Select this button from the Command Bar to load existing project files and images from disk.

When you select this button a File Browser appears. The image file types supported by Visual Image include BMP, TGA, TIF, GIF, JPG, PCX, DIB, RGB, RAS and RAW.

Images loaded here are displayed in the viewport and added to the Resource List. However, they are not included as part of the current project in the viewport when you are working in the Object Mode. To load an image to the scene, select the Mode button to change to the Object Mode, then select on the desired image in the Resource List to add it to the scene as an object.

Saving Images

Select this button from the Command Bar to save the current active image to disk.

When you select this button a File Browser appears. The file types you can save are BMP, TGA, TIF, GIF, JPG, PCX, DIB, RGB, RAS and RAW. You must specify a filename extension when saving a file here. Note that only the image currently displayed in the viewport is being saved.

Note: TIF files from Visual Image may not load correctly in some other applications that read TIF files. Therefore, for maximum compatibility among applications, we recommend using the TGA or BMP uncompressed file formats.

You cannot save project files while in the Image Mode: you must first change to the Object Mode, then select the button and type in a filename with a PRJ extension, the filename extension denoting Visual Image project files. A project file saves all the elements of the scenes independently: the background image and the objects overlaid on top of the background can continue to be manipulated as separate entities when the project is reloaded.

Note: A PRJ file can only be read by Visual Image. To save your scene as a bitmap image that can be read by other software programs, use the button under the Background Management commands to save the project to file as an image.

Managing Images

Select this button from the Command Bar to display a list of commands for the management of images in the Resource List. Images can be copied to and from the Windows clipboard and they can be deleted from the project.

Add an Image from the Clipboard

Load the image in the Windows clipboard into the project. As soon as you select this button, the image in the clipboard is added to the Resource List and displayed in the viewport.

Images loaded here are not displayed as part of the scene in the viewport when you are working in the Object Mode. To load an image to the scene, select the Mode button to change to the Object Mode, then select on the desired image in the Resource List to add it to the scene as an object.

Save an Image to the Clipboard

Save the image that is currently displayed in the viewport to the Windows clipboard. Once loaded to the clipboard, this image can be pasted into other applications that accept bitmaps from the Windows clipboard.

Remove an Image

Press this button to delete an image from the current project. After pressing this button, point to an image on the Resource List and select to remove that object from the project. The image continues to exist on disk, however it is no longer associated with the current project.

Remove all Images

Remove all images from the current project. When you execute this command, all images that are not included as objects in the scene are deleted from the project.

Painting on Images

Select this button from the Command Bar to display a list of commands for painting colors and textures onto an image. You can draw on images in solid or gradient colors, or with textures. Colors cab be applied using a variety of freehand brushes, including a standard brush, airbrush, blend brush, and pull brush. In addition, you can use a variety of shape commands to draw colors or textures onto your image.

Draw Freehand

Draw onto the image with a freehand brush. When you select this command a window displays a variety of brush and color options.

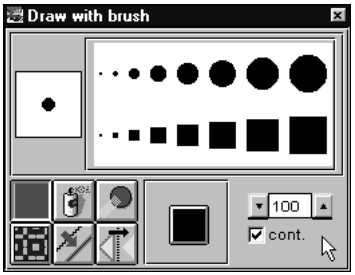

Figure 218. Use the button to draw freehand on an image

Use this window to select the desired brush size and shape, as well as the desired brush type and color.

When this button is selected in the Draw window, you are drawing with a normal, flat **Color Brush**. Select on the **Color Box** to display the Color Palette window, from which you can select the color that you wish to draw with. The value in the **Transparency** spin box next to the Color Box determines how thick the color is applied: a value of 100 is completely opaque: values below 100 become increasingly more transparent. The **Cont.** (continuous) option determines whether transparent colors are drawn continuously over an area , making that area ore opaque with each pass of the brush.

When this button is selected in the Draw window, you are drawing with an **Airbrush**. This means that the edges of the brush will apply less color than the center of the brush. As with the brush described above, a Color Box and **Transparency** spin box appear for color and opacity selection.

When this button is selected in the Draw window, you are drawing with a **Pull Brush**. When you drag in the viewport with this brush type, the colors that exist at the point on the image where you begin dragging are painted over the areas where the brush passes. A **Transparency** spin box allows you to control the opacity of the colors that are painted.

When this button is selected in the Draw window, you are drawing with a **Texture Brush**. Instead of painting with color, this brush type paints using an image texture. When you select this button a "postage stamp" box appears in place of the Color Box. Select on an image in the Resource List to select that image as the texture to paint with, and that texture now appears in this box. Now when you drag the brush in the viewport the image that you selected is painted at the brush location. A **Transparency** spin box allows you to control the opacity of the texture as it is displayed.

When this button is selected in the Draw window, you are drawing with a **Blend Brush**. When you drag this brush type in the viewport, the colors over which the

brush passes are "smudged", or blended together. This is useful for eliminating hard edges that may appear when you collage images together. The spin box that appears when this brush type is set us used to control the amount of blending: the higher the value, the more the colors are smudged.

When this button is selected in the Draw window, you are drawing with an **Sharpen Brush**. This brush exaggerates the edges between different color values in the image. After selecting the desired brush and paint type, move the pointer into the viewport and drag the brush to draw over the image.

Erase a Paint Operation

Use a brush to erase part or all of whatever you most recently painted onto the image in the viewport. When you select this command an Erase window is displayed.

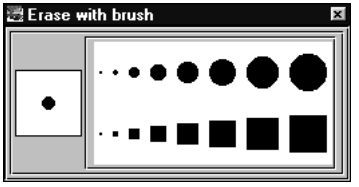

Figure 219. Use the button to erase what you just painted onto the image.

Use this window to select the size and shape of the brush that you want to erase with. When you drag this brush in the viewport, it will erase the most recently painted portion of the viewport as it passes over that area.

If this brush doesn't erase what you want it to, that means that the area you wish to erase is not the area that was most recently painted. If this is the case, you may need to use the main undo button on the Command Bar. However, remember that this button will sequentially undo each of the actions that were most recently executed.

Paint a Line

Paint a straight line on the image in the viewport. When you select this button a Paint Line window is displayed.

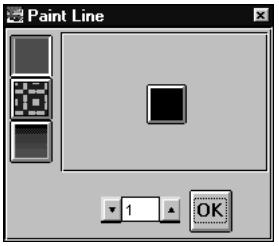

Figure 220. Use the button to paint a line on an image

Use the buttons on the left side of this window to select the colors to use when a line is painted.

When this button is selected you are drawing a line in a **Solid Color**. Select on the **Color Box** to display the Color Palette window, from which you can select the color that you wish to draw with.

When this button is selected, you are drawing a line using a **Texture**. Instead of drawing with color, this button draws a line using an image texture. When you select this button a "postage stamp" box appears in place of the Color Box. Select on an image in the Resource List to select that image as the texture to draw with and that texture now appears in this box.

When this button is selected, you are drawing a line using a **Gradient Color**. Buttons appear in the Draw Line window to allow you determine the direction of the gradient and the two colors that make up the gradient. After selecting the direction of the gradient, select on each to the two color boxes that appear in turn to select the two colors between which the gradient is performed.

The value in the **Line Width** spin box below the Color Box determines how thick the line is: the higher the value here, the thicker the line.

After setting the color type and the line width to your liking, position the pointer in the viewport and begin dragging the pointer at the position where you wish the line to begin, then release the mouse button when the pointer is positioned at the desired endpoint, and a line is drawn between these two points.

Paint a Rectangle

Paint a rectangle on the image in the viewport. When you select this button a Paint window is displayed: this paint window is the same, whether you are painting a rectangle, circle, ellipse, polygon or spline.

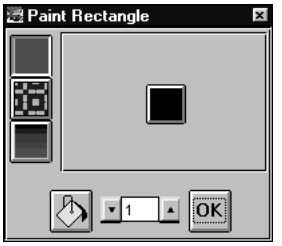

Figure 221. The Paint window is the same for all shapes

Use the buttons on the left side of this window to select the colors to use when a line is painted.

When this button is selected you are painting a **Solid Color**. Select on the **Color Box** to display the Color Palette window, from which you can select the color that you wish to draw with.

When this button is selected you are painting a **Texture**. Instead of drawing with color, this button draws a line using an image texture. When you select this button a "postage stamp" box appears in place of the Color Box. Select on an image in the Resource List to select that image as the texture to draw with, and that texture now appears in this box.

When this button is selected you are painting a **Gradient Color**. Buttons appear in the Draw Line window to allow you determine the direction of the gradient, and the two colors that make up the gradient. After selecting the direction of the gradient, select on each to the two color boxes that appear in turn to select the two colors between which the gradient is performed.

When the button is pressed you are drawing a solid shape. When this button is not pressed you are drawing an outline of the shape, and a **Line Width** spin box appears below the Color Box to define the thickness of the outline: the higher the value here, the thicker the line.

After defining the settings in the Paint window, position the pointer in the viewport and drag it to define a rectangle. As soon as you release the mouse button the rectangle is painted.

Paint a Circle

Paint a circle on the image in the viewport. When you select this button a Paint window is displayed: this paint window is the same, whether you are painting a rectangle, circle, ellipse, polygon or spline. The use of this window is described in the Paint a Rectangle section above.

After defining the settings in the Paint window, position the pointer in the viewport and drag it to define a circle. As soon as you release the mouse button the circle is painted.

Paint an Ellipse

Paint an ellipse on the image in the viewport. When you select this button a Paint window is displayed: this paint window is the same, whether you are painting a rectangle, circle, ellipse, polygon or spline. The use of this window is described in the Paint a Rectangle section above.

After defining the settings in the Paint window, position the pointer in the viewport and drag it to define an ellipse. As soon as you release the mouse button the ellipse is painted.

Paint a Polygon

Paint a polygon on the image in the viewport. When you select this button a Paint window is displayed: this paint window is the same, whether you are painting a rectangle, circle, ellipse, polygon or spline. The use of this window is described in the Paint a Rectangle section above.

After defining the settings in the Paint window, position the pointer in the viewport and select to define the first point of the first segment of the polygon. Now as you move the pointer a line is drawn between the first point and the current pointer position. Select again to select the second point: this point defines the end point of the first polygon segment and the first point of the next segment. Continue selecting points in this fashion to defined the desired polygon.

When you are done defining the polygon, select the *right* mouse button to complete the command. A polygon segment is drawn between the first point you defined and the last point you defined to create a closed polygon

Paint a Spline

Paint a spline on the image in the viewport. When you select this button a Paint window is displayed: this paint window is the same, whether you are painting a rectangle, circle, ellipse, polygon or spline. The use of this window is described in the Paint a Rectangle section above.

After defining the settings in the Paint window, position the pointer in the viewport and select to define the first point of the first segment of the spline curve. Now as you move the pointer a line is drawn between the first point and the current pointer position. Select again to select the second point: now as you move the pointer a curved line is drawn, beginning at the first point, passing through the second point, and ending at the current pointer position. Select again to define a third point, and move the pointer to define the shape of the curve that passes from the second point, through the third point to the current pointer position. Continue selecting points in this fashion to define the spline.

When you are done defining the spline, select the *right* mouse button to complete the command. A spline segment is drawn between the first point you defined and the last point you defined to create a closed spline shape.

Fill the Colors of an Image with New Colors

Paint the image in the viewport by selecting colors in that image that you wish to change to a new color, or by defining a boundary color in the image inside of which you wish to fill with a new color. When you select this button a Fill window is displayed.

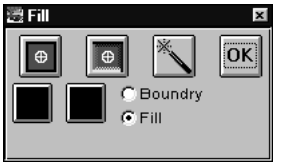

Figure 222. Press the button to paint an image based in the colors in that image

There are three different fill methods: Boundary Fill, Seed Fill and Range Fill.

Press this button to perform a **Boundary Fill**. A Boundary Fill replaces all pixels within a specified color boundary. Therefore, only use this command to paint areas that are completely enclosed by a boundary color. When you select this option two color boxes are displayed. The box on the left indicates the fill color: select on this color box to display a Color Palette window from which you can select the with which you wish to fill. The color box on the right displays the boundary color. Choose the desired boundary color by selecting the **Boundary** option on the Fill window. When this option is enabled, move the pointer into the viewport and select on the color that you wish to use as the boundary color. As you select in the viewport the boundary color box on the right changes to display the selected boundary color. After selecting the desired boundary color, enable the **Fill** option on the Fill window. Now move the pointer into the viewport and select on the part of the image where you wish the fill to begin. The fill operation will continue over the image until the selected boundary color is met.

Press this button to perform a **Seed Fill**. A Seed Fill replaces all contiguous pixels of a specific color value with another color value. Only the specific "seed" color that you pick in the viewport is replaced by the new color, and the fill operation only affects all of the pixels of the seed color that touch one-another. When this button is selected, a single color box is displayed on the Fill window. Select on this color box to display a Color Palette window from which you can select the with which you wish to fill. Then move the pointer into the viewport and select on a part of the image to pick the "seed" color to replace. All touching pixels that are the exact same color as the "seed" color are changed.

Press this button to perform a **Range Fill**. A Range Fill is similar to a Seed Fill, except that instead of choosing a single "seed" color to fill, you can choose a range of color values to fill. When this button is pressed a **Tolerance** spin box is displayed in addition to the color box. The higher the value you enter here, the more colors around

and within your selected range of colors will be affected by this command. To execute a Range Fill, move the pointer into the viewport and drag it over the range of colors that you wish to fill to "sample" those colors. As you drag the pointer, the **Number of Samples** readout on the Fill window indicates that number of different color values that have been selected. As soon as you release the mouse button the fill is performed over all contiguous pixels that fall within the selected range of colors.

Editing and Processing Images

Select this button on the Command Bar to display a list of commands for the manipulation and editing of images. Images can be resized, cropped, sharpened, blurred, flipped, mirrored and rotated. In addition, you can change the color of the image by normalizing it or by modifying a color LUT (lookup table).

If after executing one of these commands you don't like the results, select the button on the Command Bar (or the Edit, Undo command on the Menu Bar) to undo the operation and begin fresh.

Resize an Image

Resize an image in terms of the number of horizontal and vertical pixels. The horizontal and vertical dimensions can be resized independently, therefore this command can change the aspect ratio (the height to width ratio) of the image as it resizes it.

When you select this command a Resize window is displayed.

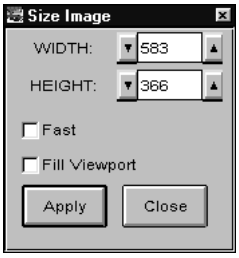

Figure 223. Use the button to resize images

The **Width** and **Height** type-ins display the current size of the image in pixels. Type in the desired new size for the object and press **Apply** to execute the command, and press **Close** to exit this window.

Select the **Fast** option to resize the image more quickly, but at a lower quality.

Select the **Fill Viewport** option to resize the image to fill the viewport. The size of the viewport can be altered by dragging the lower-right corner of the application window.

Crop an Image

Crop the current image in the viewport. Select this command, then drag the pointer in the viewport to draw a bounding box that defines the area of the image to crop. When you release the mouse button the image is cropped to fit within the bounds of the bounding box that you defined.

Sharpen an Image

Sharpen the current image in the viewport. When you select this button the image is sharpened: any edges in the image become more exaggerated.

Blur an Image

Blur the current image in the viewport: make it appear "fuzzier". When you select this button the image is blurred: any edges in the image become less well-defined.

Normalize an Image

Normalize the brightness over the current image in the viewport. Using Normalize, you can select an area of the image and adjust the brightness of the rest of the image to normalize it against the area you selected. When you select this button a Normalize window is displayed.

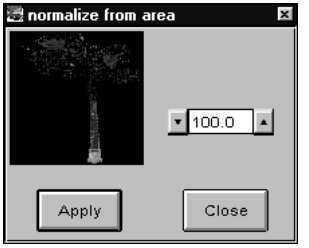

Figure 224. Use the button to Normalize an image

First you must select a rectangular area of the image to normalize from. The brightness in this sample will be the basis for the alteration in brightness of the image as a whole.

To select a rectangular area to normalize from, move the pointer into the viewport and drag a bounding box over the desired sample area. When you release the mouse button, the sample area is displayed **i**n the "postage stamp" box on the Normalize window.

The **Bias** spin box on the Normalize window allows you to determine the degree of normalization. The higher the number that is dialed in here, the stronger the normalization effect will be.

After defining the desired area, press **Apply** to modify the image according to your changes. Press **Close** to close the Normalize window.

Rotate an Image

Rotate the current image in the viewport. Each time you press this button the image is rotated 90 degrees in a clockwise direction.

Flip an Image

Flip the current image around its horizontal axis. As soon as you select this button the image in the viewport is flipped over.

Mirror an Image

Mirror the current image around its vertical axis. As soon as you select this button the image in the viewport is mirrored.

Modify the Color Lookup Table for an Image

Change the colors of the current image in the viewport by reassigning the RGB color values using color lookup table, or LUT. When you select thisbutton a graph is displayed on which you can modify the color values of each color channel independently or in unison.

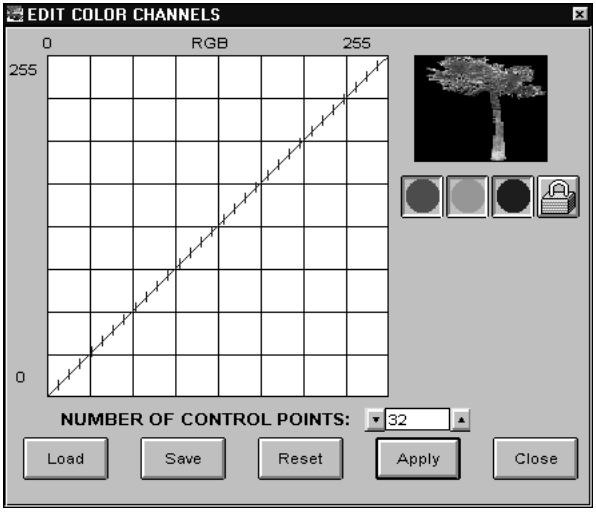

Figure 225. Use the button to modify the color lookup table for an image

The horizontal axis of the graph represents the default RGB color values from 0 to 255, where 0 is no color and 255 is 100% color. The vertical axis represents the RGB color values that will replace the existing color values.

By default, the graph displays a line going from the lower left to the upper right. This means that no color values have been altered: color value 0 on the horizontal axis is

assigned to color value 0 on the vertical axis, 10 is assigned to 10 and so on: the color values at each point on the graph are not modified.

To change the color values at any point on the graph, drag the pointer to alter the graph's curve. When you release the mouse button the image in the "postage stamp" area of the LUT window changes to reflect your changes. If you wish this display to update dynamically as you drag the pointer in the graph, press the button to "lock" the display update to the graph.

If you drag the point at the far left side of the graph (the 0 saturation value) such that it is now at the top of the graph (255, or full saturation), any colors in the image with a 0 saturation value will now change to become 100% saturated.

You can modify the color values for each of the 3 color channels independently, or in unison. The color channels that are being modified depend on which of the , and buttons are pressed in this window. Select one or more of these buttons to enable the color channels that you wish to modify. All three of these buttons are depressed by default, meaning that you are modifying red, green and blue channels in unison.

The **Number of Control Points** spin box changes the number of control points in the graph. Sometimes it is easiest to reduce the number of control points so that you can quickly define the general nature of your curve, then increase the number of control points to fine-tune that curve.

Use the **Load** and **Save** buttons to load and save graph settings to and from disk. This way you can duplicate your LUT settings over multiple images.

If you don't like your graph settings and wish to start over, press the **Reset** button. After setting the alpha channel matte to your liking, press **Apply** to execute the changes over the object in the viewport. Press **Close** to exit the LUT window.

Assign a Bump Map to an Image

Assign a bitmap image as a bump map for the current image in the viewport. When an image is used as a bump map, the differing color intensities in the image are used to create a "topography". The current image in the viewport is altered such that it appears to be mapped onto this topographic surface.

When you select this command a Bump Image window is displayed.

Figure 226. Select the button to define a Bump Map.

The first step is to select an image to use as a bump map. You can choose an image that exists in the current project, or you can load an image directly from disk. To assign an image that is already in the current project, select on the "postage stamp" window on the Bump Image window, then point to the desired image on the Resource List and select: that image will now be displayed in the "postage stamp" window. To select an image from disk, select in the File type-in box, and a File Browser will appear. Load the desired image, and it will be displayed in the "postage stamp" window.

Press the Apply button, and the image in the viewport will be altered to appear as if it is mapped onto a bumpy surface whose topography is defined by the image that you selected as the bump map.

The Bump In option reverses the topography of the bump map. When this option is disabled, brighter colors in the bump map result in depressions and darker colors result in raised areas. Enabling this option reverses the effect.

Press the Close button to exit this command.

Recoloring Images

Select this button on the Command Bar to display a set of commands to recolor the image in the viewport. Each of these commands uses a different method to modify the appearance of the current image.

When you select one of the Color Object commands, a window appears that allows you to define the nature of the operation and execute that operation. If after executing one of these commands you don't like the results, select the button on the Command Bar (or the Edit, Undo command on the Menu Bar) to undo the operation and begin fresh.

The commands for recoloring images are the exact same as the commands for recoloring Objects. Please refer to the "Recoloring Objects" section for a complete description of each of the recoloring options.

Printing Images

Print the image that is currently displayed in the viewport using the Windows Print Manager. When you select this command, you are prompted to select how you wish the image to be formatted on the page.

- Stretch to Page scales the object up or down to cover the entire area of the page that you are printing.
- Best Fit prints the object without scaling it, and will rotate the image, if necessary, to fit it onto the page. If your object size is 1200 pixels horizontally (X resolution), and you are printing on a 300 dpi printer, it will print out to a size of 4 inches across (1200/300=4).

- Scale allows you to select a specific X and Y Scale at which the object should be printed. A value of 1 indicates no change of scale. Values below and above 1 will reduce or increase the size of the printed image.

Notes