Settings in Smoothie

The key to producing the best smoothed pictures with Smoothie is using the Settings dialog box. This dialog box is brought up by either selecting Settings… from the Smoothie menu or clicking the SET button in the Smoothie document window. The Settings dialog box also comes up during batch processing allowing you to adjust the settings for that particular batch run.

Each document (or batch job) in Smoothie has its own settings that determine how the input picture will be processed. Changing these settings can have a profound effect on the output picture. It is important to understand how these settings affect your output picture for the most effective use of Smoothie.

The Settings dialog box

The Settings dialog box (below) is grouped into five sections of related settings. Each of these groups are discussed in the following five sections.

utput Colors

The Output Colors settings indicate to Smoothie how many colors you want in your output picture. Generally more is better, since anti-aliasing depends on using intermediate colors to smooth your pictures. Of course, there is a trade-off, the more colors you use, the larger your

output picture will be.

In most cases you will want to select either 256 Colors (8-bit color) or Millions of Colors (24-bit color) since most Macintosh video displays use these two display options.

If all you need is gray scale, for say text display, you can often achieve excellent results with just 16 Grays.

Black & white doesn't lend itself to anti-aliased pictures, but with dithering turned on, it can lead to interesting visual effects. It is included here for this purpose only.

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Note: It is often beneficial to experiment with various color settings combined with dithering to achieve the best balance of good looking pictures and small size. See "Dithering" on later in this chapter.

Scaling

Smoothie allows you to control the size of your output picture using the scaling settings. Often, no change in size is desired and you would simply leave the No Scaling option selected. Other times, you may want to change the dimensions of your drawing and either scale by a percentage or scale to a specific size.

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Note: Scaling by percentage allows you to increase or decrease the size of your output picture in proportion to the size of the input picture. To double the size you would use 200%, to decrease the size by half you would use 50%. See "Oversized Pictures" and "Smoothing Bitmaps" in the Advanced Techniques chapter, to learn about using 25% reduction for special precision work. Also, note that Smoothie only accepts integer percentages.

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Note: Scaling to a specific size allows you to control your output picture's size very precisely by specifying its exact height and width.

You can use these settings when you need to produce a picture that fits in a precisely defined size. When using QuickTime this can be handy for producing output pictures exactly 160 by 120, the common size for QuickTime movies. Another use is to produce a picture that exactly fills the screen.

Dithering

Dithering is a technique that allows you to approximate a color on a display where that color is not available. It works by mixing pixels of two other colors to come close to the original color. For example, you would get a dithered purple by mixing blue and red pixels.

Of course, dithered colors are never as sharp as using the real color. But given the reality of some display systems that can only display 16 or 256 colors at a time, dithering can let you produce acceptable pictures for use on these devices. You may want to note the following.

- Dithering is useful when you have an input picture that has more colors than you want used in your output picture. For example, dithering can be used when the input picture uses millions of colors and the output picture uses 256 or fewer colors. You can also dither a picture that uses 256 colors down to 16 colors or even black and white.

- Since pictures containing fewer colors are often smaller than pictures containing more colors, dithering can sometimes help you reduce the size of your output pictures.

Smoothie offers two dithering options: During Processing– which dithers the input picture when it is processed into the output picture; and When Displayed– which allows the output picture to be dithered whenever the picture is drawn to the screen.

The first option is the most commonly used. It produces a dithered output picture. An example of using this would be taking a Millions of Colors input picture and then processing it to a dithered picture that uses just 256 colors.

The second option is used when your input picture and output picture use the same number of colors, but you want the picture dithered when it is displayed on a video display that uses fewer colors. An example of this when an input picture that uses Millions of Colors is processed into an output picture that also uses Millions of Colors. When this picture is drawn on a monitor that can display Millions of Colors, it uses all of the colors that it needs, but when the picture is displayed on a monitor that can only display 256 colors, it will be drawn with dithering.

- Note: Pictures that are produced with the When Displayed setting take longer to draw on screen– even when the picture and the monitor use the same number of colors.

Editions

Smoothie contains two settings that increase the usefulness of the Edition Manager. These options allow Smoothie to automatically perform certain operations when it is subscribing to or publishing a picture.

When the Always Process New Data option is selected, Smoothie automatically processes the input picture when new data is saved into the edition. That is, when you publish new data from your drawing program, Smoothie will go ahead and process it for you without requiring you to click the GO button. This can be handy when you have both Smoothie and a drawing program open where you are publishing a picture from the drawing application and subscribing to it in Smoothie. Each time you save the published data, Smoothie will process it and display the result.

If you organize the windows on the screen such that both applications' windows are showing, you can quickly make a change to the original picture, save it, see the result after smoothing, then make more changes.

When the Always Publish Results option is selected, Smoothie will automatically republish your output picture whenever you process the input picture. This can an be useful when you are using Smoothie in conjunction with other applications. Imagine the scenario just described where a drawing program publishes a picture to Smoothie and Smoothie automatically processes the changed picture. With the Always Publish Results setting selected, you could have the output picture published out to either a third application or back to the original application. This way you could view the results in your drawing application right next to the original picture.

Miscellaneous

There are three settings grouped together in the Miscellaneous area: Background Color, Disable Smoothing, and QuickTime Compression.

Background Color

You change the background color by clicking on the square displaying the current background color. The background color is white by default (or black by default during batch processing). Clicking on the square brings up the Apple color picker (color wheel), allowing you to select the color you want.

The background color is used to fill the background of the output picture. It will often "show through" when the output picture doesn't fill in the entire output picture area.

Disable Smoothing

The Disable Smoothing setting is provided so that you can use Smoothie to manipulate pictures without having them anti-aliased. Normally you wouldn't do this, but it can useful for such things as using Smoothie to simply compress a picture using QuickTime's compressor or to turn a collection of PICT files into a movie. See the "Smoothie and QuickTime" and "Smoothie Slide Shows" chapters.

Use QuickTime Compression

The Use QuickTime Compression setting is used to have QuickTime compress your output picture after it has been processed.

To select the QuickTime image compressor you want, click the Set Compressor button to bring up the standard QuickTime image compressor dialog box.

For further details on using QuickTime image compression, please refer to the "Smoothie and QuickTime" chapter of this user's guide.