GENUINE FRACTALS 4.0

User Guide

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1. GETTING STARTED

Welcome to Genuine Fractals™ 4.0! We at onOne Software are very proud to be the makers of the extremely popular Genuine Fractals product, and we're especially excited to offer this new version. Genuine Fractals 4.0 represents a significant leap forward in utility and ease of use because of major changes we've made to the product.

Users new to Genuine Fractals will discover an easy, intuitive way to scale up their digital photographs, while "old hands" will find that the application they've relied on for years has reemerged with all their favorite Genuine Fractals features and the same powerful scaling capabilities but with a much simpler and more streamlined workflow.

Genuine Fractals 4.0 is fully integrated into Adobe® Photoshop® as an automation plug-in that now separates file saving and scaling operations, so that you can use Genuine Fractals to scale any file type, not just STN ("Sting") files. Previously, in order to scale up your images, it was necessary to first save them as STN files, then close them and reopen them again. While Genuine Fractals 4.0 still allows you to create and save STN files, you can now skip that process and do all your image scaling with Genuine Fractals – regardless of the image format – without ever leaving Photoshop and without having to save and reopen the image files.

1-1. System Requirements

Following are minimum system requirements for working with Genuine Fractals in Photoshop.

Windows

Windows® 2000 or XP operating system

Adobe Photoshop CS or later

Mac

Mac® OSX.2 or later operating system

Adobe Photoshop CS or later

NOTE: The size of image you can save or open is limited to 32,000 pixels by 32,000 pixels. This is a limitation imposed by Photoshop 7.0.

1-2. Installing Genuine Fractals

NOTE: If an earlier version of Genuine Fractals was previously installed, you must remove it before you install Genuine Fractals 4.0.

Follow these steps to install Genuine Fractals 4.0:

1. Insert the Genuine Fractals installation CD into your computer's CD-ROM drive, then double click the CD icon to display contents of the disk.
2. Run the program "**genuinefractals.exe**" (Windows) or "**genuinefractals.pkg**" (Mac) to automatically install Genuine Fractals into your Photoshop Plug-ins folder. The automatic installer walks you through a simple process.

3. If the installer removes a previous version, you must run the program again to install the new version.
4. Verify the software installs to Adobe\Photoshop 7(or CS)\ Plugins\Adobe Photoshop Only\File Formats. The automatic installer walks you through a simple process. If it does not, click "**Browse**" and select this path.
5. (Optional) Copy the contents of the samples folder to your hard disk.

You are now ready to open Adobe Photoshop and begin using Genuine Fractals 4.0.

1-3. The Genuine Fractals About Box

The Genuine Fractals About box tells you what version of the software you have and what your serial number is. Version information appears at upper right. Your serial number is located at the bottom of the box.

You can access the About box in two ways:

- Click the **GF button** on the Genuine Fractals toolbar
- Open from Photoshop

To access the Genuine Fractals About box from Photoshop:

1. On the Photoshop menu bar, choose **Help**. A drop-down menu appears
2. Choose **About Plug-in**, then choose **Genuine Fractals…**. The About box appears.

1-4. Frequently Asked Questions

Following are answers to some questions frequently asked about Genuine Fractals 4.0. If your question is not answered here, please visit http://www.onOnesoftware.com/support.html for further help.

I can't find Genuine Fractals in Photoshop now. How do I launch it?

Genuine Fractals is now on the **File** menu under **Automation**. Now you can open an image into the Genuine Fractals work area directly from Photoshop without having to save it as an STN

("Sting") file and reopen it. Your cropping and scaling operations are now completely separate from the saving operation and also independent of format. The Genuine Fractals option becomes available as soon as an image is open and selected in Photoshop. See "Launching Genuine Fractals" on page 6.

How do I open my STN files?

Genuine Fractals' crop and scale operations are now independent of the file saving process. You can open and save STN files the same way you do any other file in Photoshop. Choose **Open…** from the **File** menu and browse for your file or simply drag and drop the file into Photoshop.

I tried entering values for a crop region, but the rectangle never showed up. What's the deal?

Crop size values are in absolute coordinates, not edge offsets, and it makes a big difference. If you enter 10, 10, 10, and 10 for the values, you're describing a single point in the image, located 10 pixels (or other specified units) in and down from the upper left corner of the image, not a rectangle 10 pixels in from all sides. Your right value must be significantly greater than your left and your bottom value significantly greater than your top, otherwise your crop region will appear very tiny in the preview window. If they are less, your rectangle is inverted and won't show up at all. For more information see "Cropping an Image" on page 11.

What file formats does Genuine Fractals 4.0 support?

Genuine Fractals 4.0 opens any 8- or 16-bit RGB, CMYK or grayscale image supported by Photoshop. Any 8- or 16-bit RGB or CMYK image or 8-bit grayscale image can be saved as an STN file.

1-5. Support

For Genuine Fractals support please visit http://www.onOnesoftware.com/support.html

2. Quick Start

Genuine Fractals' cropping and scaling features are now independent of file format. This means you can scale files of any format supported by Adobe Photoshop – not just STN (or "Sting") files – with Genuine Fractals. Also, fuller integration with Photoshop means that opening Genuine Fractals is easier than ever before.

2-1. Launching Genuine Fractals

To open the Genuine Fractals Work Area:

1. Open any image in Adobe Photoshop. **Note:** If you are working with several images in the Photoshop interface, make sure the desired image window is active.
2. From the **File** menu, choose **Automate**, then choose **Genuine Fractals…**. The active image opens in the Genuine Fractals Work Area.

2-2. Opening an Existing STN File

To open an existing STN file:

1. In Photoshop, choose **Open…** from the **File** menu. The Open File dialog box appears.
2. Browse directories and select your file.
3. Click **Open**.

Alternatively, drag and drop an STN file into Photoshop.

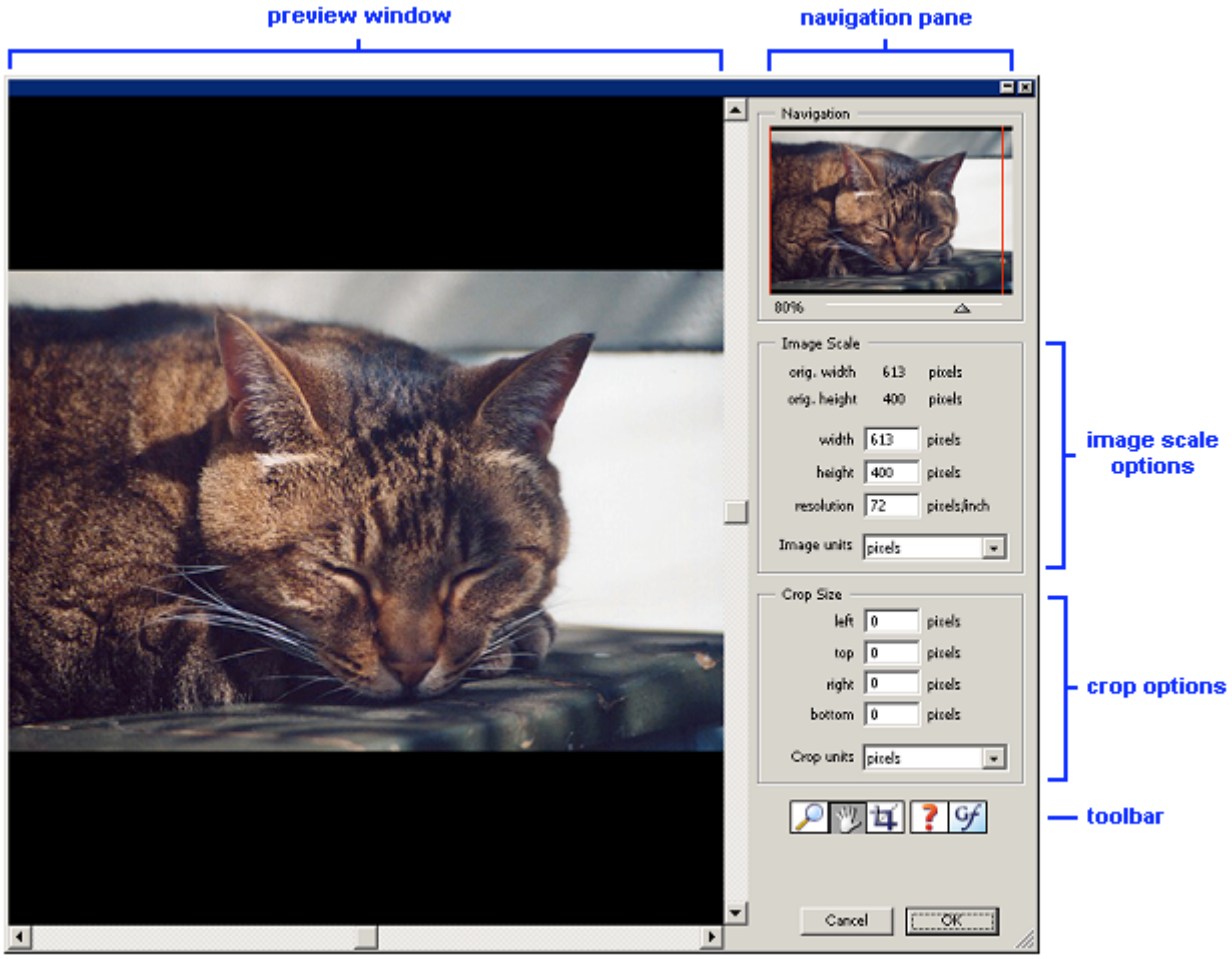
To scale the .STN image in Genuine Fractals, make sure the image window is active and launch Genuine Fractals (see Launching Genuine Fractals above).

3. USING GENUINE FRACTALS

Using Genuine Fractals is easier than ever before. Now that Genuine Fractals has been completely integrated with Photoshop as an automation plug-in, several steps have been removed from opening files, saving files and other operations.

3-1. Genuine Fractals Work Area

The Genuine Fractals user interface has been completely reworked with a view toward simplifying the workflow of professional image users. The left portion of the work area is a Preview window. A Navigation pane in the upper right corner shows a smaller view of the entire image, with red lines marking out exactly what portion of the image the Preview window is displaying.



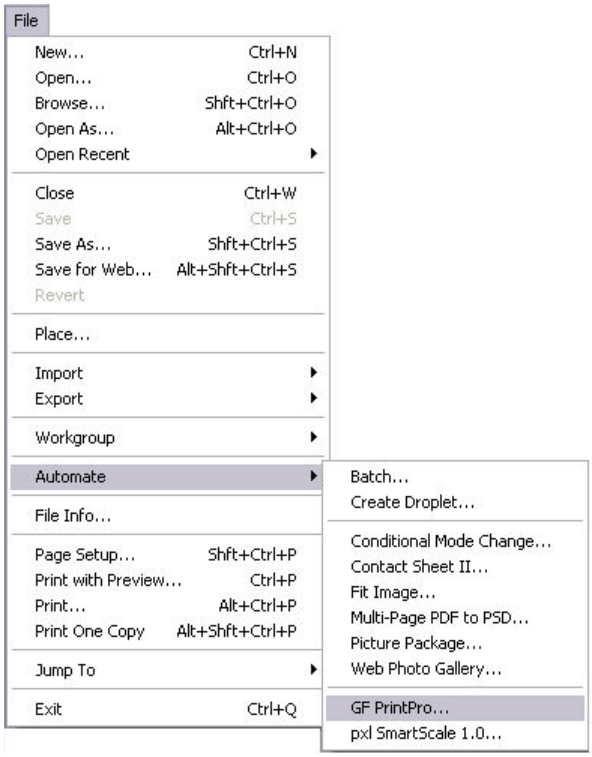
At the right side, below the Navigation pane, are panels for image scale and crop options. A toolbar is found below the option panels.

3-2. Launching Genuine Fractals

Using Genuine Fractals is simpler than ever. You may access the Genuine Fractals scaling and cropping options any time an image is open and active in Photoshop.

To open an image into the Genuine Fractals Work Area:

1. Open an image in Adobe Photoshop. Make sure the window for the desired image is active (if you are working with several images in the Photoshop interface, click the image you wish to scale with Genuine Fractals).
2. From the **File** menu, choose **Automate**, then choose **Genuine Fractals…**. The active image opens in the Genuine Fractals Work Area.



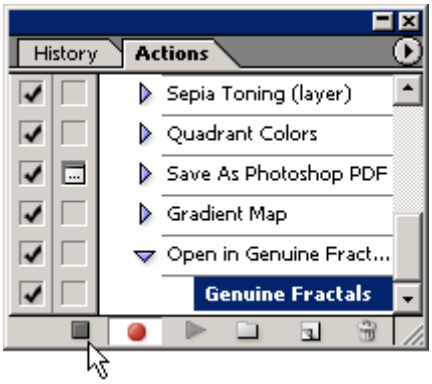
Note for veteran Genuine Fractals users: You no longer have to save the image as an STN (also called “Sting”) file first, as was necessary in previous versions. Any 8- or 16-bit RGB, CMYK or grayscale image can be opened with Genuine Fractals directly from the Photoshop interface. Genuine Fractals still opens STN files, but it is no longer necessary to create STN files for scaling purposes. For more information see “Opening STN Files” on page 8.

Using Photoshop Actions to Create an Opening Shortcut

You can use Photoshop’s Actions functionality to create a one-key shortcut for opening an image into the Genuine Fractals Work Area. Follow these steps:

1. Open an image in Adobe Photoshop.
2. Click the arrow to the right of the **Actions** tab to access the Actions menu.
3. Choose **New Action…**. The New Action dialog box appears.

4. Name the action **"Open in Genuine Fractals"** in the Name field.
5. Select an available Function Key from the drop-down list.
6. Click **Record**.
7. Open Genuine Fractals by choosing **File > Automate > Genuine Fractals…**. The Genuine Fractals Work Area appears.
8. Click **OK** to close the Genuine Fractals Work Area.
9. Click the **Stop** button on the **Action** tab as shown below.

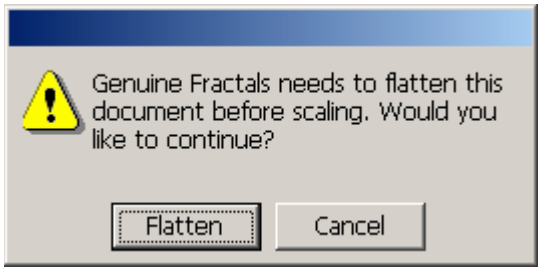


The Action is recorded and you may now open Genuine Fractals with a single click using the function key you selected.

You can also select which Set the action should be stored in or create an entire Set for Genuine Fractals actions. See your Adobe Photoshop Help documentation to learn more.

Flattening

Before opening an image with layers, Genuine Fractals must "flatten" it. When you open an image that has layers a dialog box appears asking whether you wish to flatten the image and continue.



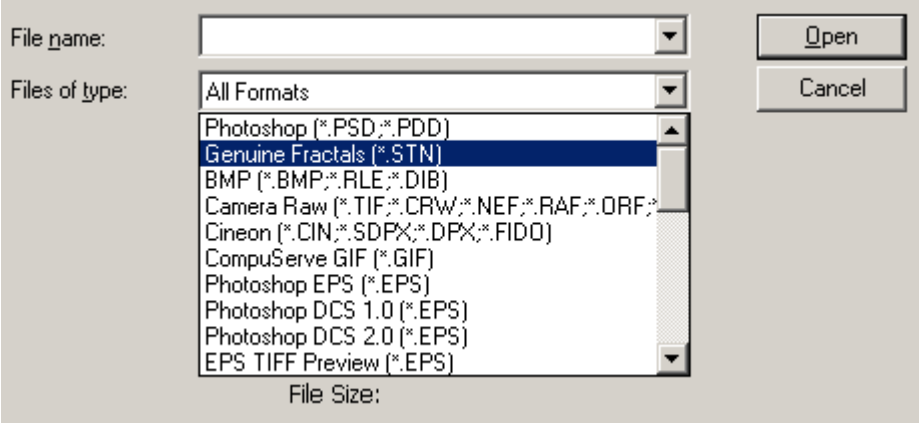
If you click **Cancel** here Genuine Fractals does not open the image. Clicking **Flatten** reduces all layers in the image to a single background. **Note:** If you click **Flatten** and continue, but later click the **Cancel** button at the bottom right of the Genuine Fractals Work Area, the layers will be restored to the image in Photoshop.

3-3. Opening STN Files

With Genuine Fractals 4.0 it is no longer necessary to save an image as an STN ("Sting") file before you can open it. However, STN files are fully supported. You can "save as" and open STN files the same way you save as and open any other file in Adobe Photoshop. (For more information on creating STN files, see "Saving Images" on page 14).

To open an STN file:

1. Choose **Open…** from the **File** menu. The Open File dialog box appears.



2. Browse directories and select your file.
3. Click **Open**.

You can also drag and drop an STN file into Photoshop.

3-4. Zooming and Panning

Zooming on an Image

Zooming changes the view of your image onscreen only. Zooming is a viewing operation, not a scaling operation, and does not affect your image.

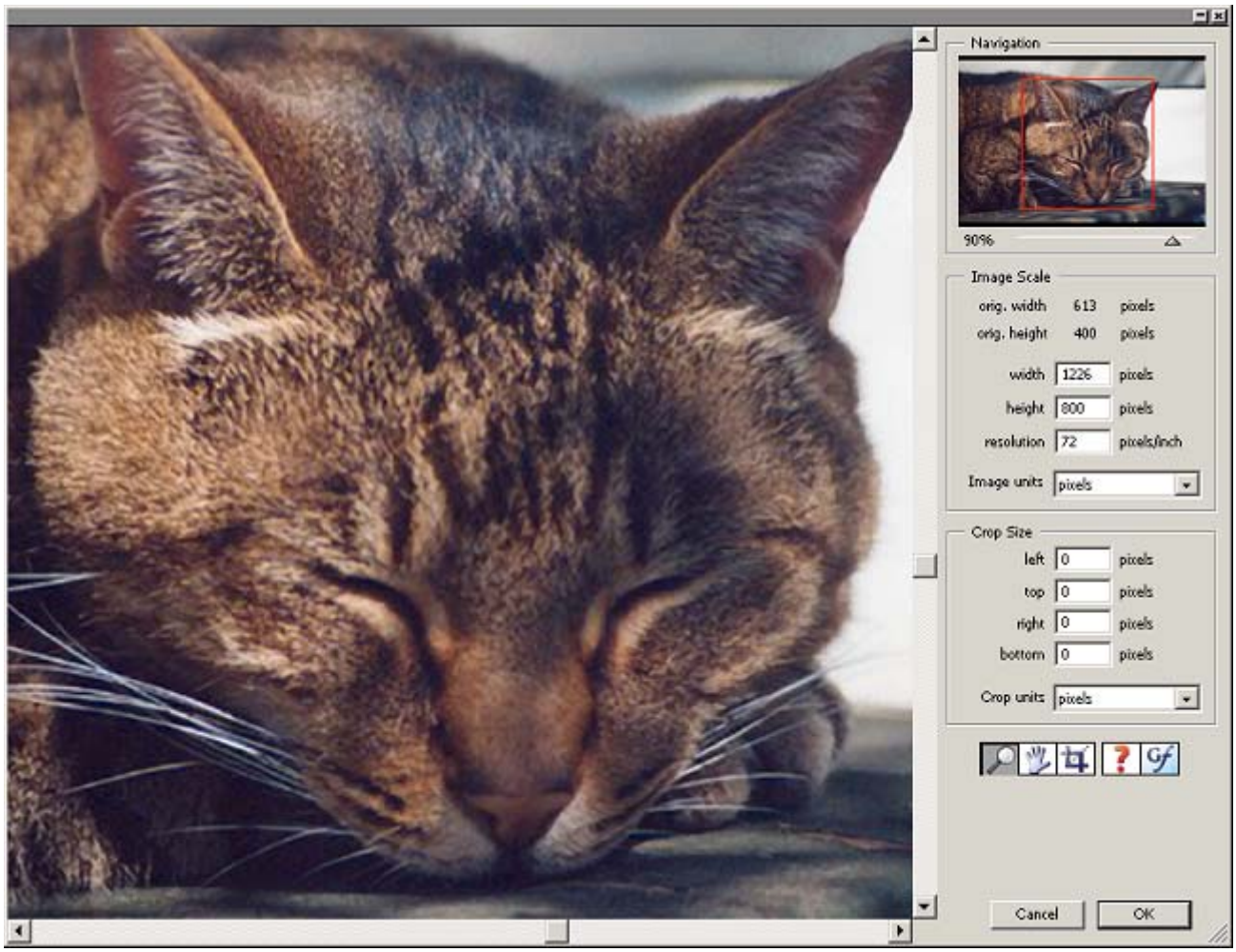
There are two ways to zoom on an image:

- Zoom tool
- Slider beneath Navigation pane

Using the Zoom tool and the Navigation pane are the same operation except that the Zoom tool centers the new view where you clicked in the image.

To zoom on an image using the Zoom tool:

1. Click the **Zoom tool icon**  on the Genuine Fractals toolbar at the lower right side of the Work Area.
2. Click on the image in the Preview window. A new, zoomed in view appears centered at the point where you clicked. Zooming occurs at the rate of 10% of the whole image per click.



Panning an Image

There are three methods for panning an image:

- Scroll bars at the bottom and right side of the Preview window
- Clicking and dragging in the Navigation pane
- Pan tool

To pan an image with the Pan tool:

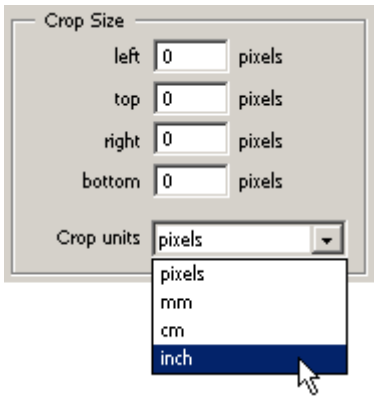
1. Click the **Pan tool icon**  on the Genuine Fractals toolbar at the lower right side of the Work Area.
2. **Click and hold** anywhere on the image in the Preview window, then move the cursor to view areas outside the window. Again, the red outline in the Navigation pane at upper right shows you what portion of the image the Preview window is displaying.

3-5. Cropping an Image

Genuine Fractals enables you to crop an image before scaling it by using the Crop tool  or the Crop Size panel or both.

By default, values in the Crop Size panel are expressed in pixels.

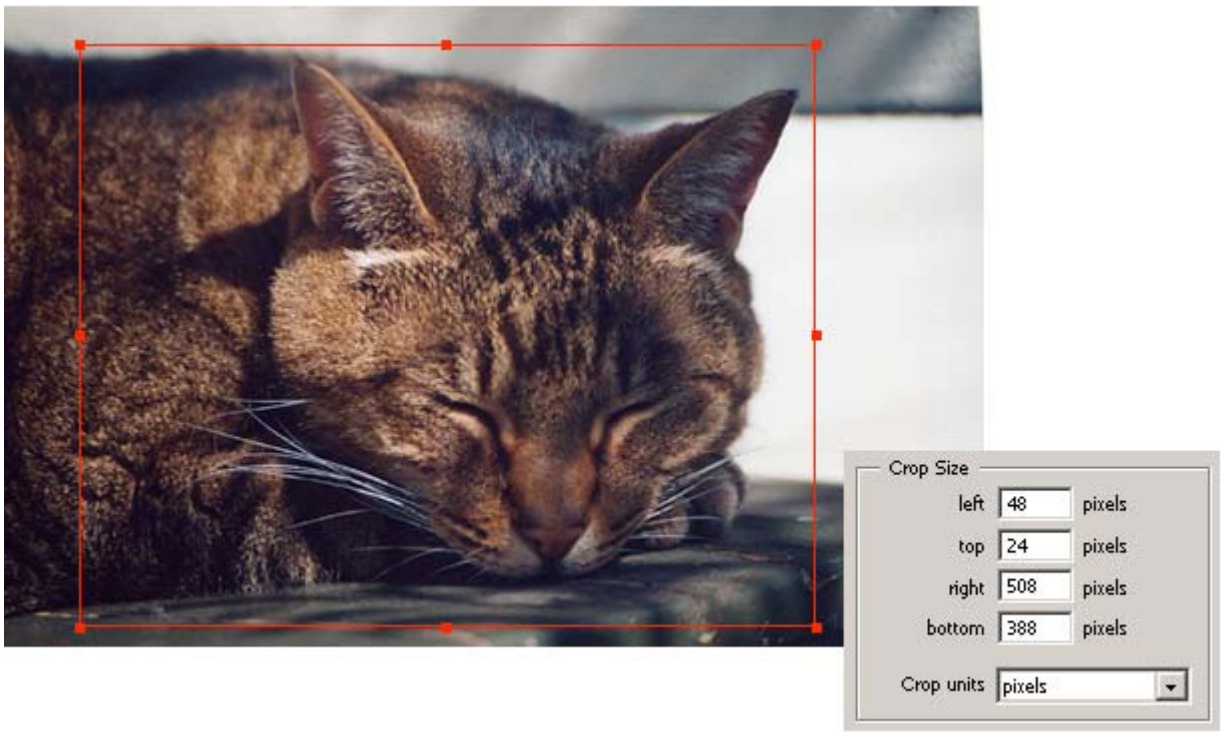
To select a different unit for these measurements, choose a different one from the **Crop units** drop-down list.



Using the Crop Tool to Define a Crop Region

To define a crop region by drawing:

1. Select the **Crop** tool from the Genuine Fractals toolbar.



2. Drag the cursor across the image in the large Preview window to make your desired crop rectangle. The crop area you defined is outlined in red. The values in the left, top, right and bottom fields in the Crop Size panel are automatically populated with the numerical values describing your rectangle.
3. Resize the crop region by clicking the grippers or “handles” at the corners or sides. If you are satisfied with the crop region you have defined, move on to specify scaling values or click **OK** to close the Genuine Fractals Work Area. When you close the Genuine Fractals Work Area your image displays cropped in Photoshop.

Defining a Crop Rectangle Numerically

Crop Size values define distances from the upper left corner, that is, from the top and left sides. In the illustration above:

- the left edge of the crop rectangle is 48 pixels in from the left side of the image
- the top edge of the crop region is 24 pixels down from the top of the image
- the right edge of the crop region is 508 pixels from the **left** side of the image
- the bottom edge of the crop region is 388 pixels from the **top** of the image

To define a crop region numerically, enter values for a valid rectangle in the Crop Size fields.

NOTE: If you enter a value in the “right” field that is less than that in the “left” field, or if you enter a value in the “bottom” field that is less than that in the “top” field, your rectangle will not be valid and will not be displayed.

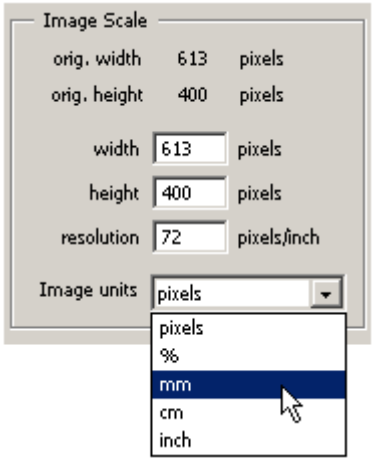
3-6. Scaling an Image

Genuine Fractals enables you to scale an image to a size larger or smaller than the original. You can view and change scaling information in the Image Scale panel of the Genuine Fractals Work Area. For information about opening images, see “Launching Genuine Fractals” on page 6 and “Opening STN Files” on page 8.

The Image Scale Panel

Besides displaying the original width and height of the image, the Image Scale panel also displays the current image width, height and resolution, all of which you can change by entering new values in the appropriate fields.

By default, these values are displayed in pixels. To select a different unit for these measurements, choose a different one from the **Image units** drop-down list.



Values for all the information in the panel change immediately to the newly selected image unit.

Setting Scaling Parameters

To scale an image:

1. Use the **Image units** drop-down list to display values as pixels, percentage (%), millimeters, centimeters or inches.
2. Click in any field to enter a new value. Changes will take effect after you “tab” out of that field or click somewhere outside it.

NOTE: It is likely you will only have to alter a single field, since the dimensions retain their value ratio to one another. For example, in the illustration above changing the “height” value from 400 to 800 will automatically change the “width” value from 613 to 1226 so that the image will retain its original proportions. Similarly, if you view the image information as a percentage (%), then changing the “height” from 100% to 200% will automatically change the “width” the same amount, and vice versa.

Scaling the "Final 800 Percent"

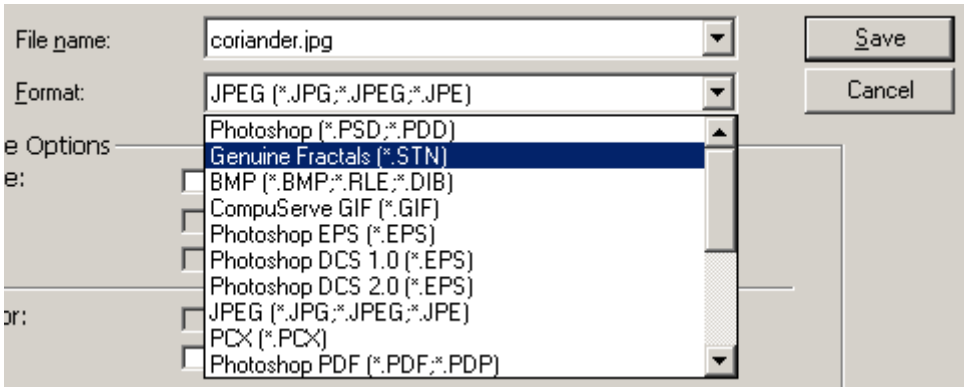
Genuine Fractal's scaling ability is best within a 500-600% increase range in size or resolution. However, by using a combination of Genuine Fractals scaling and Photoshop bicubic features, you can scale up your original images by about 800%. Follow these steps:

1. Select your image in Photoshop and select Automate from the File menu, then choose Genuine Fractals. The image opens in the Genuine Fractals Work Area.
2. On the **Image units** drop-down list in the Image Scale panel, select **percent** (**%**).
3. Increase width and height to 400% (changing one automatically changes the other). Click **OK** to exit the Genuine Fractals Work Area.
4. In Photoshop’s **Image** menu, choose **Image Size…**.
5. Set the units in the Pixel Dimensions panel to **percent**.
6. Set width and height to **200** (again, changing one automatically changes the other), and click **OK**.
7. **Save** the file for a total increase of 800%.

3-7. Saving Images

Because Genuine Fractals 4.0 is fully integrated into Photoshop as an automation plug-in, you can now use Genuine Fractals to scale any image supported in Photoshop without having to encode it to STN (“Sting”) format. Simply use the Genuine Fractals plug-in for cropping and scaling, then close the Genuine Fractals window and save images – in whatever format you choose – as you normally would within the familiar Photoshop interface.

While it is no longer necessary to save images to STN format before you can scale them with Genuine Fractals, some users may wish to do so. Any 8- or 16-bit RGB, CMYK image and any 8-bit grayscale image can be saved in STN format. The Genuine Fractals’ STN format is available on the list of formats in the Save As… dialog box in Photoshop, shown below. See your Adobe Photoshop documentation for more information on saving files.



Genuine Fractals and ICC Profiles

The STN format preserves ICC profiles. If a profile is attached to a JPEG or other file that you save to the STN format, that profile information will be carried forward.

Lossless and Visually Lossless Encoding

When you save an image in the STN format in Photoshop, you are given the option to save the file in a “lossless” manner or in a “visually lossless” manner. Lossless means that no information is discarded, and thus that the encoded image has pixel-for-pixel fidelity to the original. Smaller files can be achieved with lossy compression, although the more information is discarded, the less quality the image retains. In high resolution images you can discard quite a lot of image detail before the human eye detects any loss. Thus, saving a file as “visually lossless” retains a very high degree of image quality yet results in a significantly smaller file size.

4. APPENDIX

4-1. Glossary

Following are definitions for some words that you may encounter in using the Genuine Fractals product or its Help documentation.

algorithm

A detailed sequence of steps for solving a logical or mathematical problem or performing a task.

CIE-Lab

A color standard based on imaginary primary colors XYZ, which are purely theoretical and independent of device-dependent color gamuts such as RGB and CMYK. The virtual colors have been selected so that all colors which can be perceived by the human eye lie within their color space.

CMYK

Acronym for cyan-magenta-yellow-black. A color model that describes each color in terms of the quantity of each secondary color (cyan, magenta, yellow), and "key" (black) it contains. The CMYK system is used for printing.

crop

To cut off part of an image, such as unneeded sections of a graphic or extra white space around the borders.

dpi

Acronym for dots per inch. A measure of screen and printer resolution that is expressed as the number of dots that a device can print or display per linear inch.

duotone

A color mode which adds a single accent color to a grayscaled image.

encode

To convert a graphics file from one size to another, either larger or smaller, for purposes of printing, editing, or transmitting electronically.

flattening

A Photoshop process in which all visible layers are merged into the background, greatly reducing file size. Flattening an image discards all hidden layers and fills the remaining transparent areas with white.

fractal technology

A collection of processes based on fractals, which describe a class of shapes characterized by irregularity, but in a way that evokes a pattern. The distinguishing characteristic of fractals is that they are "self-similar"; any piece of a fractal, when magnified, has the same character as the whole.

grayscale

A sequence of shades ranging from black through white, used in computer graphics to add detail to images or to represent a color image on a monochrome output device.

indexed color

Indexed formats are formats which are mapped to a smaller color palette - 256-colors or less. All GIF images - whose bit depths can range from 1 to 8 - are, by definition, indexed images.

In an indexed image, colors are stored in a palette, which is sometimes referred to as a color lookup table. The indexed image's palette contains all of the colors that are available for the image.

layered

In Photoshop, a layer is a section of information within a file. For example, a RGB file consists of at least four layers: the combined RGB layer, a Red layer, a Green layer, and a Blue layer.

lossless compression

The process of compressing a file such that, after being compressed and decompressed, it matches its original format bit for bit.

multichannel

Color mode in which each multiple channel in Photoshop uses 256 levels of gray.

res-up

The process of increasing the size of a compressed graphics file to a high resolution image.

RGB

Acronym for red-green-blue. The three colors of light which can be mixed to produce any other color. Colored images are often stored as a sequence of RGB triplets or as separate red, green, and blue overlays though this is not the only possible representation (see CMYK).

scale

To enlarge or reduce a graphic display, such as a drawing or a photographic image, by adjusting its size proportionally.

sharpening

In Photoshop, a variation of a traditional compositing technique used to sharpen edges in an image. It is useful for images intended both for print and online.

STN files

The STN file format is based on patented STiNG technology and has the extension ".stn". The STN format provides lossless encoding at about 2:1 (and up to 10:1) file size reduction or visually lossless encoding at typical 5:1 (and up to 30:1) or more file size reduction. The STN format also gives you the ability to crop and scale an image for multiple purposes.

visually lossless compression

The process of compressing a file such that some data is lost after the file is compressed and decompressed, although the loss is not detectable to the eye.

wavelet technology

A collection of processes based on wavelets, which are mathematical functions that vary over a limited extent of time. Genuine Fractals uses its proprietary wavelet technology to efficiently shrink and enlarge digital images.

4-2. Contacting onOne Software

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http://www.onOnesoftware.com

Customer Service: http://www.onOnesoftware.com

Technical Support: http://www.onOnesoftware.com/support.html

Sales: For sales please call 1-888-968-1468

4-3. Copyrights and Trademarks