Generator

By Martin Evening

Generator: generating assets from layers

The Generator feature uses a customizable JavaScript-based platform and can be utilized to automatically create derivative files from the master image you are working on. To get set up you'll first need to go to the Photoshop Plug-ins preferences and check the Enable Generator box. This launches Generator so it is always running in the background. Following that you'll need to enable Generator for each image document you are working on. To do this, select File ⇨ Generate ⇨ Image Assets. This initiates Generator for the selected document and the setting remains sticky the next time you reopen that image. Once you have followed these steps you can follow specific layer naming conventions to determine how derivative files will be created. You see, Generator uses the layer or layer group naming to determine what derivative files are created and, more specifically, their attributes: such as the file format used, the quality setting and image size. Basically, you define the desired file output by the way you name the layers. For example, adding a file format suffix, such as .jpg, .png, or .gif, lets you indicate the file format you want the derivatives to be saved in. You can specify more precisely how the file is to be saved. If you add .png to a layer name, it will (by default) create a PNG 32 file. But if you wish, you can specify other PNG formats such as: *.png8*, or *.png24*. With JPEG you can specify the desired image quality setting (from 1 to 10) by adding a number. The default JPEG quality setting is 9, so adding *.jpg6* creates a JPEG file saved using a 6 quality setting. To specify the JPEG quality more precisely you can add a percentage value. So you can type *.jpg55%* to save a JPEG that uses a 55% quality setting. However, the .gif tag saves a basic alpha transparency GIF and there are no other options that can be specified using Generator.

Extended tagging

Other tags can be used to specify size by adding one of the following tags at the beginning of the layer name. To adjust the size by percentage you can type in a percentage scale value, such as *25%* or *33%* at the beginning of the layer name. To adjust the size to fit within specific dimensions, enter the desired unit dimensions. For example, 600 x 400 can be used to specify creating a file that fits within a 600 x 400 pixel size (Generator uses pixel values unless otherwise specified). So, you would need to add *in* (for inches), *cm* (for centimeters) and *mm* (for millimeters). Tags can be separated by commas when naming a layer to indicate that more than one type of file should be generated (but each tag must be properly formatted with a valid file extension).

Generator overhead

Enabling Generator does imply some additional overhead. However, since Generate Assets must be selected on a document basis it seems that this only applies when it's active on an open document.

For example, naming a layer *20% garden.png, 10in x 8in garden.jpg8* will create a 20% scaled PNG, plus a 10 inch x 8 inch JPEG file saved using a quality 8 setting. To cope with this the file naming in Photoshop now accommodates names up to 255 characters long.

Summary of how Generator works

Let me summarize what happens in the background when you use Generator. Whenever you work on a brand new image and File ⇨ Generate ⇨ Image Assets has been activated, assets are initially saved to a generic assets folder on the desktop, most likely named: Untitled-1-Assets. Whatever assets have been generated will be saved to this folder. Once a master file has been saved though, an assets folder is created alongside the parent file inside whatever folder directory you chose to save the file to. This assets folder uses the same name as the file it relates to. The temporary desktop assets folder then disappears. All subsequent edits made to the open image will continue to generate updated assets, regardless of whether the master file has been saved and the parent file updated.

Generator uses

Generator is a feature that should be of interest to a lot of different types of Photoshop users. The following example shows a simple use of generator in which it was used to create a low res composite JPEG version of a layered image. This would continuously get updated as the file was worked on. A practical use for this type of workflow would be the ability to have instant access to a low res, composite version of the image you are working on, ready to email to a client. A photographer might also use Generator to generate image assets at dual pixel resolutions for inclusion in a Web layout optimized for high density pixel displays. Overall, I would say this feature was devised mainly with multimedia designers in mind. By using Photoshop CC in conjunction with the Edge Reflow CC program, designers can use Generator to work on a master file in Photoshop and generate Web asset files that are automatically updated in real time. For instance, designers at The Engine Co. have used Generator to write a plug-in for their Loom gaming engine. This allows them to update the user interface for a game in Photoshop while it is being played. Generator also allows designers to generate Retina/HiDPI resolution assets to accompany regular resolution versions. All in real time.

Adobe Edge Reflow CC

Adobe Edge Reflow CC is a new Web tool that can be used to create responsive Web designs that adapt content to different screen sizes. Using Edge Inspect CC, it is possible to extract the CSS code from an Edge Reflow project to work on in other code editors, such as Dreamweaver.

Export options

RGB mode images can be exported via the File ⇨ Export menu and also via the Layers panel. This essentially provides an alternative way to export images or layer selections (via the Layers panel) in a way that is faster and with fewer steps than using Save for Web (such as when using the Quick Export option).

First, I suggest you go to the Export preferences (Figure 1), where you can configure what happens when you choose the export option. The Quick Export Format section lets you choose which format the files can be saved in when applying a quick export and whether transparent pixels are to be preserved or not. In the Quick Export Location section you can have the option either to be asked where to save asset files each time, or to always export to an assets folder next to the current document.

When you choose File ⇨ Export ⇨ Quick Export as…, or go to the Layers panel menu and choose Quick Export as…, the assets saved will depend on what is selected in the document and whether Generator extended tagging has been utilized. In general, when you choose Quick Export as, this exports a full resolution version of the image saved to the specified format. If a layer or layer group is targeted and extended tagging has been used in the naming, a full resolution version will get exported as well as one with the attributes specified using the Generator syntax.
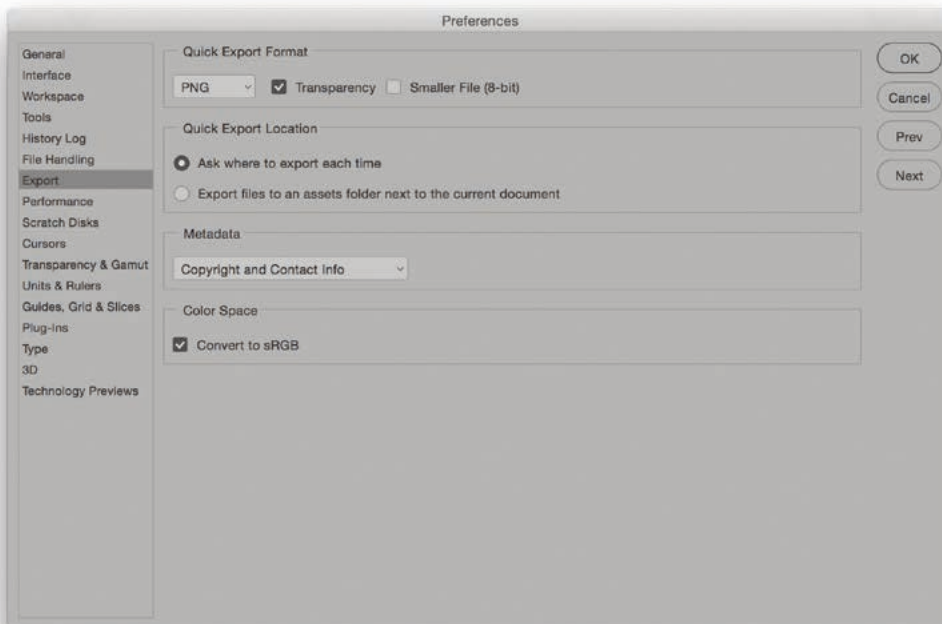
Figure 1 The Export preferences.

If you want more control over the export process, choose File ⇨ Export ⇨ Export as… This opens the Export As dialog shown in Figure 2, where you have complete control over the file format selection and file format settings. Instead of having 'PNG' and 'PNG-8' file format options in the File Settings section, there is now just a single 'PNG' format option where you can select 'Smaller Size (8-bit)' to output using the PNG-8 format. The last used file format and other export settings are remembered when choosing File ⇨ Export ⇨ Export As… As with a Quick Export, the export location depends on the settings configured in the Export preferences.

The Image Size section can be used to determine the output file size and below it the Canvas Size can be set independently, allowing you to export an image with an added canvas area (see Figure 2). The height and width controls can also be adjusted using the arrow controls and scrubby sliders. The width, height and Scale dialogs are all linked so that when a custom value is entered to one setting the other two will update automatically.
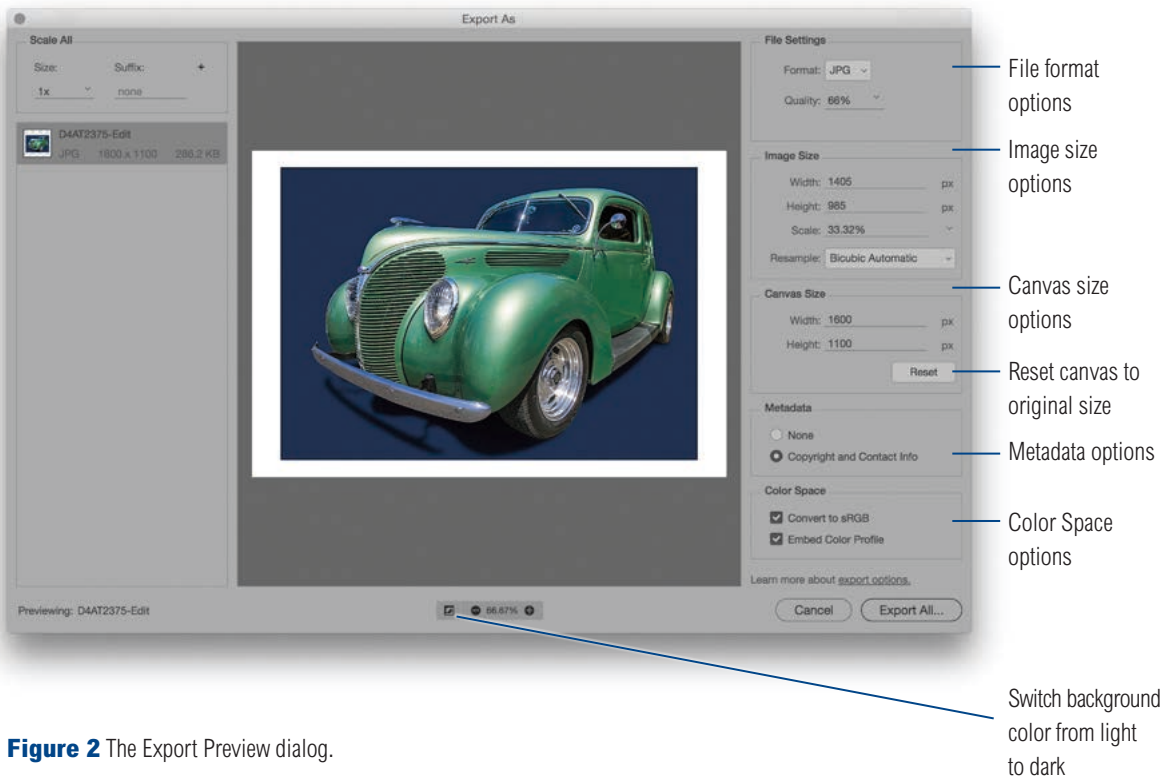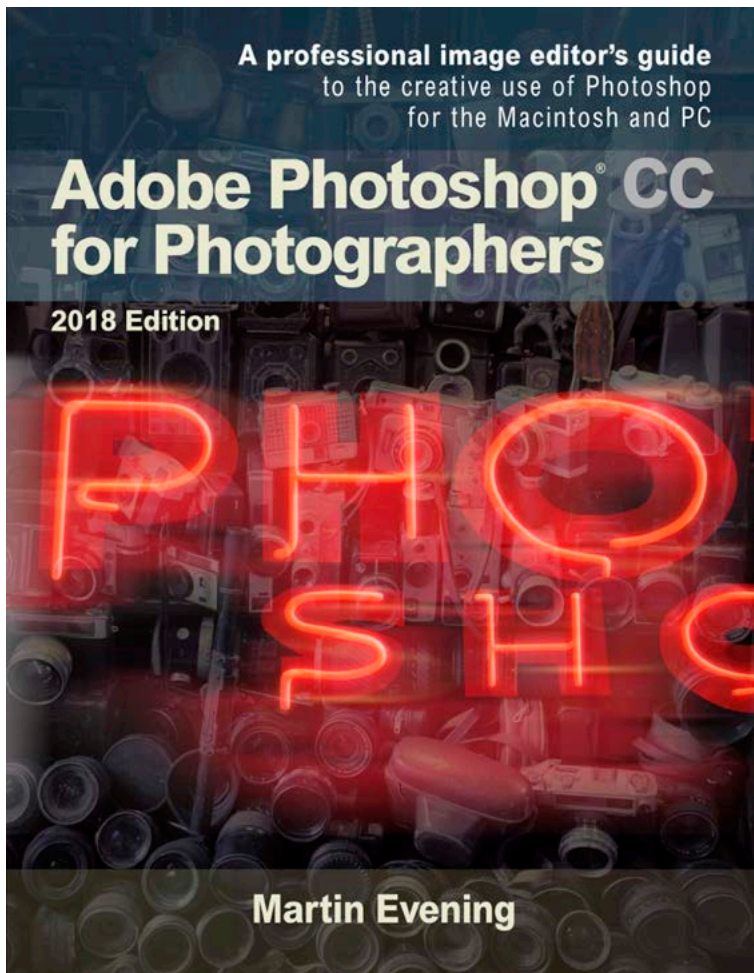

File format options

Image size options

Canvas size options

Reset canvas to original size

Metadata options

Color Space options

Switch background color from light to dark

Figure 2 The Export Preview dialog.

Adobe Photoshop CC for Photographers: 2018 Edition book

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