RAW Developer earns points for its accurate and efficient batch processing, robust tools and excellent rendering ability.

BY ANDREW RODNEY

Top *honors*

IRIDIENT DIGITAL RAW DEVELOPER

I've come to the conclusion that shooting RAW is both a blessing and a curse. The blessing is the flexibility and the image quality one c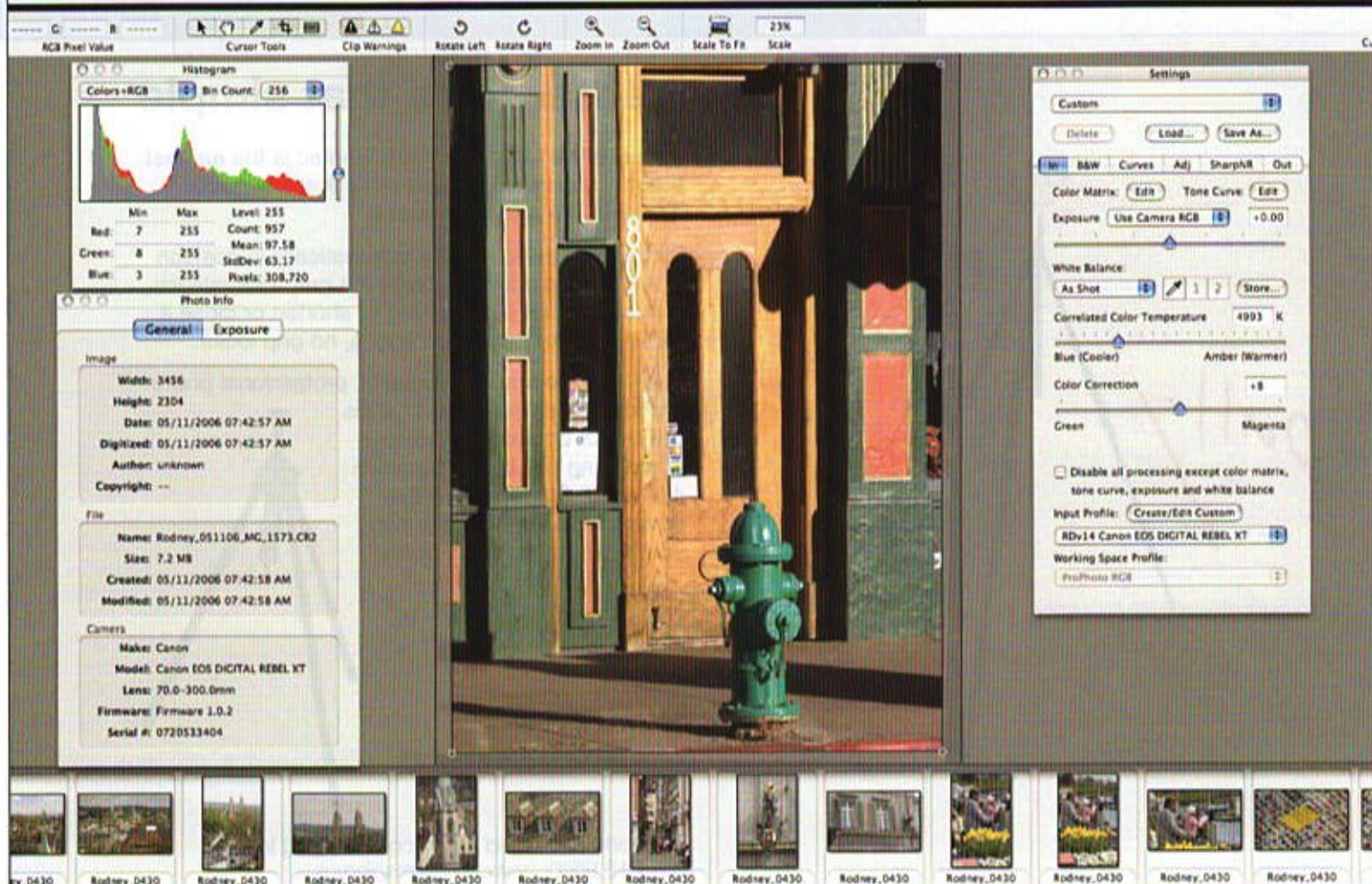an obtain by fully controlling the rendering of RAW image files. The quality and aesthetics of the rendering depends on the RAW converter software used; with the original RAW data file intact, we can take advantage of updates in RAW processing algorithms. The curse? Deciding which RAW converter to use, and how.

While the two big A's, Apple and Adobe, battle it out for supremacy in the RAW converter market, smaller players are making impressive inroads to the market, such as Iridient Digital with its software, RAW Developer (RD). I've been playing with this product for some time with impressive results. For quality in image conversion, so far, this software takes top honors. With the release of a new version of RD that's universally native for the Intel Mac and that delivers improved RAW quality, it's time for me to take a closer look at the application. (*RD only runs under Mac OS X.*)

In comparison to the user interface of Adobe Lightroom Beta and Apple Aperture, RAW

Figure 1. In RAW Developer, a simple browser of thumbnails displays along the bottom. They can be configured to show up above or to either side of the main processing preview window. The image processing options are all accessed from the Settings pane on the right. The Photo Info palette provides EXIF data embedded in the file.
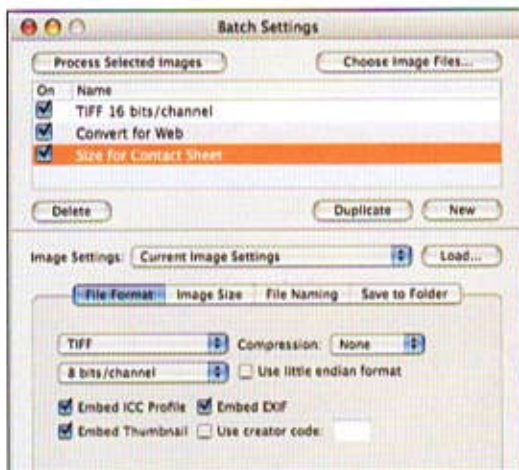
Figure 2. The Batch dialog provides any number of user configurable queues. Here I could process one or more RAW files in the browser (or files I select in an Open/Save dialog) to full-resolution 16-bit and simultaneously save JPEGs for a Web page as well as thumbnails for a contact sheet.

Developer's interface may seem pedestrian, but forget the eye candy. RD's OS X interface is both clean and simple to use. Opening multiple RAW files provides a thumbnail view of each next to a resizable window that previews the image selected for processing (**Figure 1,** previous page). The thumbnails become a simple browser that gives you the ability to apply RAW processing instructions to any or all of the images for batch processing.

As with other RAW converters, corrections can be saved with each RAW image as a sidecar file. These metadata processing instructions can be modified or applied later in the workflow to produce a high-resolution rendered image. RD isn't quite as capable as, say, Adobe Camera RAW with Adobe Bridge as a browser/converter; it has limited provisions for sorting, ranking or adding keywords or EXIF data. But RD is far ahead of LightZone in applying multiple RAW conversion instructions to groups of RAW files. *(See review at http://bonus.ppmag. com/2006/04/review_light_er.html.)*

The batch processing dialog provides lots of functionality (**Figure 2**). I can set up multiple processing queues and apply one or more to

WHAT TO LOOK FOR IN YOUR RAW CONVERTER

RAW converters are becoming more complex as they are built into browsers designed for image editing, adding metadata and even becoming DAMs (Digital Assist Managers). In my opinion, the quality of the RAW rendering should be the primary focus of these products since the ultimate image quality is critical for photographers.

When evaluating a RAW converter for quality, it's not always obvious where to start. Most users open a single RAW file and examine the default rendering and often make decisions based on this initial preview. Consider the fact that all RAW converters have to begin with some default rendering assumption for all cameras and images. Sometimes the default color and tone appear acceptable, but often you need to adjust the settings and save them as a new default rendering for subsequent RAW files. The better and more flexible RAW converters allow you to build a suite of settings to load and apply to various types of RAW files and how they were captured.

The initial images you use to evaluate the converter can be important. Choose images that are optimally captured using the lowest ISO, and correct exposure. Then examine how each converter handles images with high ISO settings, which is a good test of the noise reduction settings. Test RAW files shot under varying lighting conditions: daylight, tungsten, strobe and even mixed lighting. Skin tones can be very difficult and demanding subjects for testing a RAW converter.

There is also something to be said for shooting a target with known color values such as the GretagMacbeth ColorChecker. You can obtain the RGB values for this target based on a specific RGB working space and then compare those values to the RGB values in the converter. For example, I often need to alter the red selectively to remove yellow in

order to get the red patch numerically correct. Then I'll save this as one default for rendering images shot in a similar situation.

You need to dig a lot deeper to see how well the rendering is conducted once you get past the global tone and color work. I usually turn off all sharpening controls but leave any noise reduction defaults on and then process a series of full-resolution files. At this point you need to zoom in on the files in Photoshop to get an idea of the quality. At 100 to 300 percent, you can inspect numerous areas to see how well the converter handled shadow noise and smoothness in abrupt tones.

Be sure to look for ugly artifacts from the demosaicing algorithms. These artifacts can be more easily seen when you apply a severe tone correction in Photoshop's Levels or Curves. While you would never make such an adjustment for real work, doing so while testing the conversions open up many areas for visual inspection.

Many of the issues you see at 300 percent magnification may never appear in the output, but it's useful to know how clean the initial image really is. Additional adjustments in Photoshop could bring the file closer to manifesting these artifacts in print.

Sharpening is highly subjective. I prefer to evaluate the rendered file quality with all sharpening controls turned off in the RAW converter. You can always apply more sharpening after making your initial evaluation. It isn't always clear when a RAW converter's sharpening is actually off, therefore if one rendering from a converter appears sharper than another, don't place too much credence on this alone. Many converters apply some sharpening even when set to Off. Look at edge detail and shadow areas to see if the conversions are clean and smooth and devoid of artifacts.

a group of RAW files. I can alter the color space and bit depth of the processed images, the rendered image size, the file format, the file names. Each queue can save the processed images into different folders. As such, RD can be quite productive in handling a high volume of RAW files that need to be targeted for multiple output needs.

Most of the processing controls are in the Settings window, which contains buttons for the various tab panels for image processing. These tools will be familiar to most users, but there are some unique additions. For example, while curves operate as you'd expect, I can set a popup menu to work in either RGB or LAB. In the LAB mode, I can select just the two color channels (a* and b*) separately from luminance, and control the saturation of the image with this curves interface. I'm able to affect the saturation based on the tone scale of the image. Being able to toggle the curves from RGB to LAB provides powerful editing functionality not found in an RGB curve; I can alter tone without affecting colors.

RD has robust color to black-and-white conversion tools, including the Channel Mixer. There are no less than four sharpening algorithms, including Unsharp Mask, all designed to sharpen only luminosity. I generally prefer to sharpen after rendering, using masks in Photoshop. However, the default settings in RD provided a low dose of capture sharpening that I wouldn't hesitate to use if the workflow prohibited my individually sharpening the images later on in Photoshop.

RD is fully color management- and ICC-aware. I'm able to encode the RAW data into any RGB profile installed on my Macintosh. If you wish to create custom ICC camera profiles, RD has the ability to turn off all image-processing tasks to produce a linear encoded RGB file.

The histogram is based on the output color space you select. It has numerous display options, such as showing RGB, luminance and even saturation feedback. I do wish it gave me the ability to place multiple sample points on the image. As with Aperture, the RGB values are visible only while the cursor is over an area in the preview.

All in all, the RAW Developer tool set is ample, and the rendered quality is impressive. The converter supports over 100 digital camera models, including RAW files in DNG format; price: $99.95. A fully functional demo is available for download at http://www.iridientdigital.com/products/rawdeveloper_download.html. ∎