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DNG - The New Digital Negative Standard

As camera circuitry and components evolve in speed and sophistication, while the cost of mass storage diminishes, an increasing number of digital photographers are discovering the power and flexibility that the RAW format gives them. The creative controls they are given is truly liberating.

However, there are as many camera raw formats as there are camera manufacturers (and camera models), and format specifications are proprietary, that is, not open to public scrutiny. This means that not every raw file can be read by the many image editing and cataloging software packages out there. So, photographers find themselves in a bind - using these raw file formats as a long-term archival solution carries a risk, and sharing these files across complex digital workflows is even more challenging.



The solution for this growing problem is the Digital Negative (DNG), a new, Adobe-sponsored, publicly available archival format for the raw files generated by digital cameras. By addressing the lack of an open standard for the raw files created by individual camera models, DNG helps ensure that photographers will be able to access their files in the future.

There are some stumbling blocks that DNG will need to overcome. First, industries are generally skeptical about standards that are developed and promoted by a single company (Adobe in this case). Everyone will be watching not just for what Nikon, Canon and the other camera makers do, but whether Microsoft and Apple will weigh in on this issue. Second, camera makers will have to decide if they are willing to implement a universal raw format in their cameras. Photographers have the opportunity to exert the appropriate pressure. Also, an eventual move to a standard will be easier for camera makers to handle rather than keep up with their own array of proprietary formats. Third, other software vendors will need to support the new format. This seems very likely since the DNG format specification is very similar to the widely used TIFF format. More importantly, Adobe has clearly documented all file specifications for DNG. Ultimately, it is much easier to support one new documented format than to keep current with the panoply of undocumented camera formats out there.

DNG is starting to take hold. This March, Hasselblad and Leica announced their support for the DNG format in their new digital bodies. More and more third-party imaging software vendors are releasing software updates that support the format. Some examples are iView MediaPro, Extensis Portfolio 7 and Alto Cumulus.

Should you use DNG? If you buy-in to the notion that a standard file format is the way to go, then it makes sense for you to begin archiving in DNG format - using Adobe's free converter available on their website. (The new Adobe Photoshop CS2 will likely have built-in conversion functionality.) Obviously, if you save to DNG instead of your camera's native format you are betting on Adobe being the longer-term player in this game, or at least that DNG will be endorsed by camera makers over time. As a Nikon user, I ask myself if in 20 years, Nikon will support the raw (.nef) images I make with my D-70 and D-100 today. I think it is more likely that the DNG open standard file format will take hold and that I will be able to work unencumbered with my current files in the future. I am committed to using Adobe tools, so I see this as a risk tradeoff worth taking. On the downside, if you like your camera maker's software for processing your raw images (e.g.; Nikon *Capture*), it will not currently support DNG. Camera makers have too much invested in their current formats and will be slow to add support. You will probably need to wait and see how things play out.

In conclusion, as digital photography and cameras evolve, it is likely that you will buy new cameras several times in the next decades. Using camera-specific raw image formats, you may very well wind up with archives filled with a multitude of incompatible files, each requiring different software applications - some of which may not even run anymore on the latest computers and operating systems. The DNG specification will unify this collection of images under a single standard, which will evolve with the technology, and give us reliable access to our images regardless of what camera was used.