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gavin
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Intro

The article by Gavin Phillips which forms the main part of this feature was originally held over from the last issue of *Professional Imagemaker*. This turned out to be a timely delay because in the intervening period the annual *Photographer of the Year* competition was judged and turned into something of an HDR-fest. Like all new techniques it is very easy to stray into 'overdone' territory and, sadly, visual reasoning sometimes gets sacrificed on the altar of the technology gods. After a while the judges' resistance built up, especially when the technique was too coarse.

So that then is the message for the head of this feature – treat HDR with care, one step over the line and everything comes to bits!

Why is that?

The reason for HDR lapsing into a caricature of reality is that when the human eye interprets a scene it expects shadows to be darker, less colourful and reduced in dynamic range. If the range in the shadows is expanded, the eye is immediately confronted with something that it does not expect. This can confuse, challenge or irritate in roughly equal measures depending upon the circumstances. In general, portraits do not respond well unless the face of one of great character (aka 'well lived in'), landscapes can do quite well as long as the expected form of the land is not too challenged. Architecture seems to respond quite well, again providing that the natural lack of information in dark areas is not too revealing. External, gothic architecture seems to respond quite well and success has been had by a number of competition entries in which this is exploited along with a bride or model in the shot. Bear in mind though that such strong effects can very rapidly become 'so last year', the winning, trend setters will have moved on! The general public, who may well be the providers of your bread and butter, of course, may not have seen much of the effect and still buy it, it is still perfectly valid as a way of distinguishing your work amongst your competitors.

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Taking a High Dynamic Range Photograph

The software to use, fastest work flow
and how to avoid overcooked images.

HDR in Depth – Camera Set-up

I always shoot RAW because the finished HDR is always better than using JPGs. I have tried various in-camera JPG settings, but RAW always look far better.

Put your camera into 'bracketing' mode. Depending on your camera, you will be able to shoot a sequence of shots at one- or two-stop exposure increments, automatically. All you do is hold the 'fire' button down for 1–2 seconds. If you shoot in the fastest operational mode of the camera you will have less trouble if things are moving slowly; moving trees and leaves are always a problem.

I shoot sets of five at 1-stop increments for most day-time outdoor HDR, and sets of seven for interior or harsh sunlight, outdoor HDR. My Nikon D300 (and the D700, D3) only allow a maximum of 1-stop increments. Some Canons allow up to 2-stops, which is better. You can shoot a set of three at 2-stops and get the same exposure range as I get with five at 1-stop. You would only use 2-stops for the minimum set of three images. Using 2-stops is too much for more than three image sets. For interior I would shoot a set of five at 1½ stop increments.

I use Aperture Priority mode and keep the ISO as low as possible. Your camera must be perfectly still for the sequence of shots, so a tripod is essential most of the time. However, I have shot successful HDR hand-held. You must either hold the camera firmly on a wall or railing, or press yourself against a tree or wall.

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HDR Specific Software I Use
All these software programs offer free trial downloads.

Photomatix Pro 4.0 (PC/Mac compatible)
Photomatix offers many features and an intuitive, easy to use interface. It's strength is outdoor daytime HDR. It really opens up shadows and produces very pleasing colours that are easily controlled with the sliders.

The batch processing feature is a huge time-saver. Merging one set of three, five or seven images into a 32-bit image can take from 10 seconds to over a minute, depending on your computer speed and how many images are in the set. If you have more than a few sets of HDR, (at Yosemite I had hundreds of sets) this consumes a large amount of time.

Photomatix's batching feature allows you to merge dozens/hundreds of sets of HDR into 32-bit images automatically while you do something else. You then open the 32-bit image instantly in your software of choice and apply the tone-mapping, which is the only part that interests you.

With interior shots, Photomatix often introduces a blue cast into sunlight coming in through windows. I often use 'Oloneo' or 'Dynamic Photo HDR' for interiors. For night HDR, I prefer the other program reviewed here, 'Dynamic Photo HDR.'

Pricing is around £80, but there are several coupon codes available for Photomatix. You can try 'kelbytraininghdr'

Dynamic Photo HDR (PC/Mac compatible)
I use DPHDR for all of my night HDR, and some daytime HDR as well. It depends how the image looks.

It often creates more natural looking skies. It's also great if you want to go in a different creative direction. You can get a great variety of different colour effects. My 'Train to Surreal' image was created in this program.

But sometimes I see odd artifacts introduced into images; burnt skies or excessive noise. So I don't recommend this program as your only HDR specific software. It is good to give you different creative ways to go. Cost is around £40.

HDR Efex Pro (PC/Mac compatible)
Like all Nik software, HDR Efex Pro's user interface is intuitive and easy to understand. I liked the variety of one-click presets, and it is easy to keep your HDR looking natural. I still prefer the colour in Photomatix for outdoor HDR though.

Nik's patented 'U Point Technology' is included. With this you can fine-tune very specific areas in your image without effecting the rest of it.

But HDR Efex Pro does not offer batch processing and it is significantly more expensive than the other HDR software reviewed, at around £100.

Oloneo (Free Beta – PC only)
Oloneo surprised me with it's good layout and ease of use. It is particularly good with interior HDR and gives many ways to alter the colour temperature to help control any colour casts.

It's easy to keep your exterior HDR natural looking. But they are a bit flat. No batch processing. It is well worth trying, as it's free.

Photoshop CS5 HDR
New to CS5 are some basic HDR tone-mapping sliders and presets. I have worked with it on some sets of HDR and compared it to the tone-mapping I get in the other software here. The results are far better in Photomatix, etc.
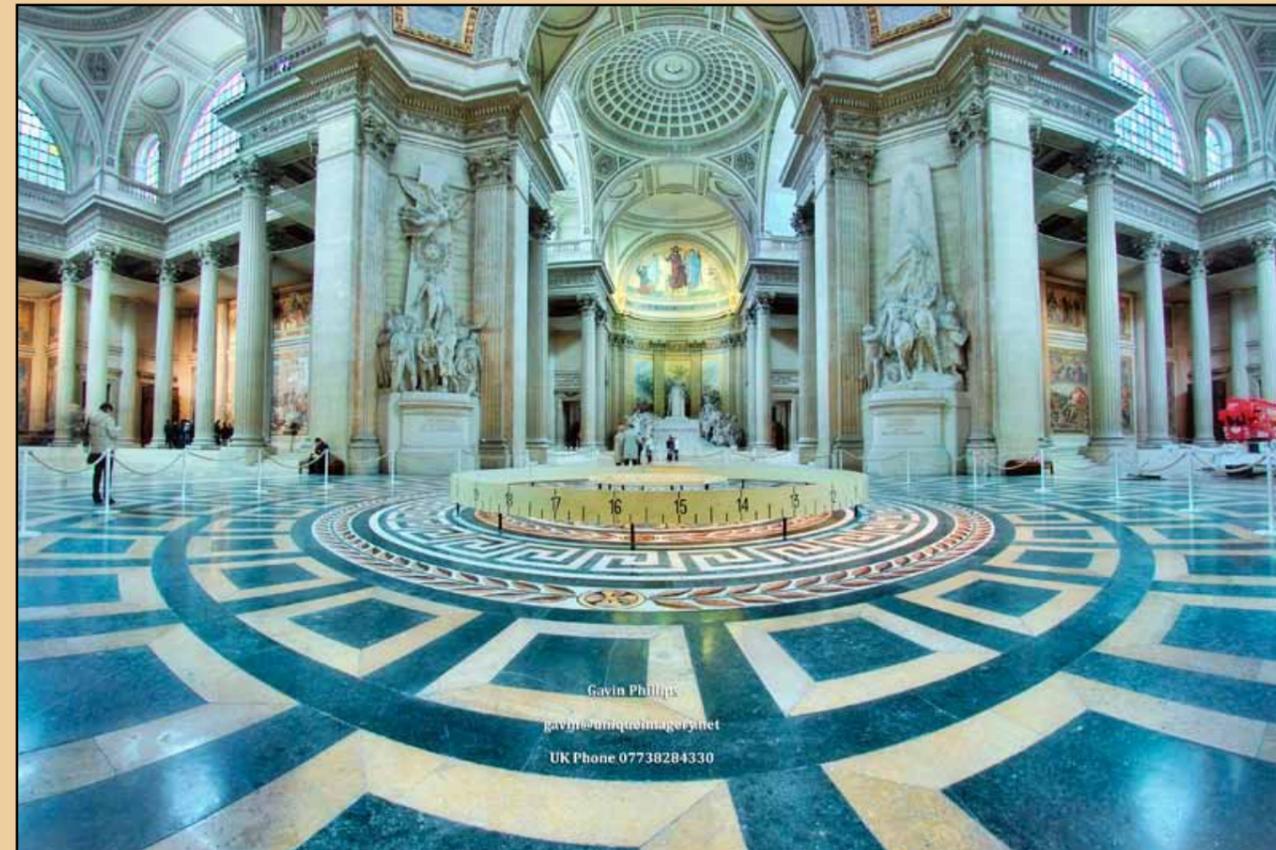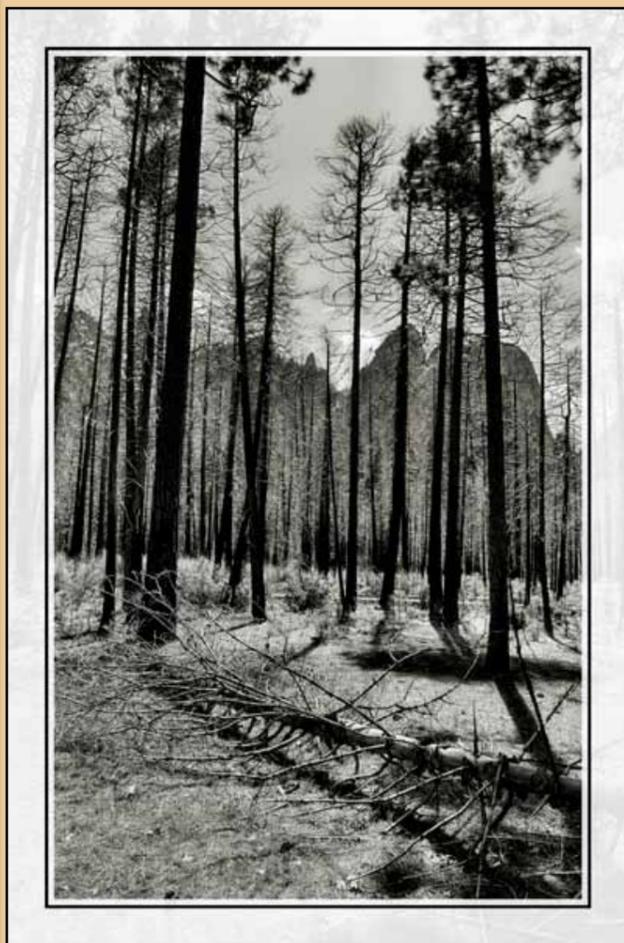
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Photoshop's great strength is finessing the image after you have completed your tone-mapping. Removing blemishes, cloning, color, lighting correction and sharpening are essential, and none of the other software does this.

Lightroom HDR Work flow

Photomatix and HDR Efex Pro give you a Lightroom plug-in that is included when you purchase the Pro versions. The plug-in allows you to select your set of HDR in Lightroom, right click, and export to either of these programs. You still do the tone-mapping in Photomatix or HDR Efex Pro.

Single-shot 'Pseudo HDR'

All the HDR software reviewed here give you an option to create a pseudo HDR out of a single RAW or JPG image. You really need RAW with single shot HDRs.

The advantages are that you do not have to take multiple shots, and there will be no 'ghosting' to remove of people moving in the image.

However, you do not have the same dynamic range that you would have with multiple exposures. Pseudo HDRs tend to be noisy and you don't get the same detail. But when you have rapidly moving people, animals or vehicles, pseudo HDRs often look far more interesting than just working the image in Photoshop. And they are very quick to process.

HDR and People

You can photograph people with HDR selectively. People posed, or a bride and groom standing still at the altar. Even if they are standing 'still' there is likely to be some slight movement between the frames. This is referred to as 'ghosting.' The colour of the peoples faces will be incorrect as well. To correct this I use one of the bracketed set of regular RAW images and Photoshop to mask-in just the people into the HDR image.
It only takes a couple of minutes. I only take a few HDR images with people in them. This captures the occasion in a way I could never achieve otherwise.
My HDR Work flow
I download all my HDR sets into a folder. I sort the winning sets in Photoshop/Bridge or Lightroom, and move them to a 'Winners' folder. Different sets must be kept together. Don't mix a set of three with a set of five or seven, it will completely mess up the batch processing.

Batch rename the winning sets in Photoshop or Lightroom with a number sequence. If I have 20 sets of five bracketed images, it will be numbered 1 through 100.

I then use Photomatix to batch my 20 sets of five into 20 single, 32-bit images. While Photomatix is doing this, I'm in Photoshop or doing something else.

When Photomatix finishes it's batching, I go in and open the 32-bit images in Photomatix for tone-mapping. The tone-mapping is very fast. Once I set-up the sliders for the first image, I usually stay pretty close to those settings for the other images. I then finish the image in Photoshop.

Avoiding HDR Issues

Halos can be an issue with HDR images. Halos are usually found where the sky meets buildings or trees in an image. It is a line, or band, of lighter sky. It does not look natural and is very distracting.

You usually get if using extreme settings in your tone mapping, although sometimes you may still see halos even with conservative settings. In that case you may have to swap out the sky in your HDR image with the original sky in one of the bracketed images in Photoshop.

Over saturation is easily controlled in all the programs I reviewed here. Once you have the settings the way you like them, you can save them as one of your custom presets.

You have complete control over your image. It is easy to stay within a regular color range, but still gain a significant advantage by using HDR. You have to watch you do not overdo it, particularly with skies.

Finishing in Photoshop

Although the HDR specific software is great for the merging and tone-mapping stage of your HDR sets, there is no substitute for the final finessing of your image in Photoshop. I usually use a custom 'curves' adjustment. You can use the brush tool on the 'curves' mask to adjust how much of that curves is used in your image, and where it is used. Another excellent, but often overlooked adjustment layer, is the 'Shadow/Highlight'. There maybe areas of the image that require careful cloning out. Don't forget that sometimes you can use the 'spot healing brush' to blend away something small in your image instead of always using the clone tool. Photoshop CS5's new 'content aware' brush option is very handy for fast clean-up as well.

The last thing I do is selective sharpening. I use high pass sharpening for all my images that do not have people in the image. You find this under 'Filter', 'Other', 'High Pass'. When people are in the image I use 'unsharp mask' or 'smart sharpening'.

Creative Freedom

HDR gets quite a lot of criticism because many of the images are over-worked.
This often happens when new creative techniques become available, people tend to overdo it. For that matter, any image can be overworked in Photoshop or any software, not only HDR.

Some photographers have become so worried about being criticised for using HDR, their HDR images look exactly the same as a single image worked in Photoshop. HDR is different; it has a vibrance and detail that is great for certain situations.

For some images I go further and use a full range of Photoshop adjustment layers, filters, masking and plug-ins to go in many different directions. We have so many creative tools to work with today; I'm not going to limit myself to staying within a regular photograph all the time. As the late famous photographer Fred Picker stated, 'Photographers owe nothing to reality.'

I offer my clients both types of images. This increases sales and gives them more creative and marketing ideas.
Gavin Phillips offers 'live' HDR webinars and training movies. He also offers custom Photoshop 'actions' and Lightroom Presets. See his website for more information.

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