Digital …

A monthly column by Harry

This month is about presenting your images to other people. I've started a discussion thread **here**. Send questions for future columns to **harry.iris@usa.net**.

How should I show my images to others?

Let's start with a contemporary audience and talk about the future later. If you are shooting digital images, you have two primary choices: prints or electronic. These are vastly different media.

The most easily understood difference is in the amount of detail seen. For example, a modest, 5"x7", print is typically generated from a digital image with about 3 million dots, or pixels. We call it a 3 megapixel image. If the original has more megapixels, it will be reduced to 3 megapixels by software in the printer before printing begins. On the other hand, a typical projected image is 1024x768 pixels, or about 0.78 megapixels, which is roughly one quarter the number of megapixels in a 5"x7" print. This means that the print may have four times more detail than the electronic projected image.

The comparison is more dramatic if we compare an enlargement with the projected image. A big enlargement suitable for a typical photographic competition might be 16 megapixels which is 20 times more detail than in the projected image. An HD TV (or a large computer screen) shows more detail than the typical projected image but still less than the 5"x7" print and only about one tenth that of the photographic enlargement. An emailed photograph of 800x600 pixels is even less detailed than the projected image and less than one sixth of the 5"x7" print. Many Web images are even less detailed.

The conclusion is that prints have much more detail than electronic images.

A related issue is the shape of the image. For the above discussion, I assumed the images completely filled the media, i.e. there was no margin or border or blank space. In practice, however, the image may not be exactly the same shape as the medium.

This is particularly obvious when you take a shot in a vertical orientation. In the case of a print, you simply turn it round to make a vertical so you lose no detail. In a projected image, though, one has to reduce the image size to make it fit on the screen, top to bottom, leaving large blank areas on the sides. In the process, the displayed pixel count drops from 0.78 megapixels to 0.44 megapixels.

Given the megapixel mismatch, how can we edit a 16 megapixel image on a computer screen? We do it by enlarging the image so that it is many times larger than the screen. Only a piece of the image shows on the screen but we can scroll around to see the whole image, piece by piece. This is such a common issue that Adobe has made a keyboard shortcut for its Photoshop products: if you hold down the spacebar, the mouse cursor turns to the hand and when you click and drag (spacebar still held

down) the image moves around the screen. When you release the spacebar, the cursor goes back to what you were doing before.

When you are preparing an enlargement for printing it is essential to check it at 100% or 1:1 magnification to avoid nasty surprises when the print comes back.

If you have an image prepared for printing, then you can view it well on electronic media. On the other hand, if you try to print an image prepared for electronic media, then you will get fuzzy results.

Of course, projected images are suitable for showing economically to a larger audience as in a lecture hall or on the Web. Showing prints simultaneously to a larger audience requires making multiple copies, as in a magazine.

You can use projected images to display successfully small parts of a digital photograph. So, you can crop out a detail from your original image and make an excellent projected image although the print would be horrible. This is good to bear in mind if you are considering entering images into the Club competitions: if you are short on pixels, go for the projected image; if your image relies on detail, go for the print.

There are other differences between prints and electronic images, including colour range and longevity but those issues will have to wait for another time.