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With a a digital camera, who needs film?

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I'Ve been a fan of digital photography for the past few years — since about the time affordable digital cameras reached what a lot of us thought would be the 2 megapixel (Mpxl) plateau. Even the manufacturers were suggesting that consumer cameras wouldn't exceed 2 Mpxls for several years.

About that time, 3 Mpxl cameras became available and now the upper end of the "prosumer" model lines is increasingly occupied by 5 and 6 Mpxl cameras.

Those in the industry say that we'll have basic no-frills 2 Mpxl cameras for less than \$100 before 2005. Because a 2 Mpxl image will make a photo-quality 4x6 print and an acceptable 8x10 print, look for film to do what 8mm movie film did when video cameras took over: virtually disappear from the consumer marketplace.

Some pros will continue to use film for the foreseeable future, but many have already switched to digital. For personal use, digital cameras have a lot of advantages.

- You can take a picture and make prints right away.
- You don't have to pay for film or processing.
- You have prints made only of the pictures you want.

My current favorite: Olympus E10

Serious amateur photographers will find a camera like the Olympus E10 enough to pull them away from their 35mm cameras. The E10 is a 4 Mpxl camera and the already released E20 is a 5 Mpxl camera. These cameras capture enough information to make a photo-realisitic 8x10 print — even an acceptable 11x14 or 16x20.

The E10, if I have it create a full-resolution uncompressed TIFF file, will give me a 12MB file for each picture I take. But unless I need to create large images for publication, I can reduce the file size to about 2.5MB.

Settings range from automatic everything to manual everything. It's a camera that feels right in my hands even though it isn't shaped like most 35mm cameras. It looks a lot like a "645 roll-film" camera.

The E10 has a built-in pop-up flash, but you should plan to buy an external flash. The built-in flash is like all built-in flash units: not very powerful and not well positioned. For horizontal shots, it's fine; for vertical shots, you'll dislike the resulting shadows. But because you can boost the sensitivity of the camera to an ISO rating of 320, you can often shoot in "available darkness" without the flash.

The E10 comes with a 16MB SmartMedia card. You'll need to buy more. The camera accepts both CompactFlash memory and SmartMedia memory — both kinds can be in the camera simultaneously. CF is usually a better choice because information can be

written to the card faster and because it's less expensive than SM cards. For most users, the differences are unimportant. Some manufacturers use one, some use the other, and Sony uses its proprietary Memory Stick media. Don't base your decision about a camera on the media; find a camera that feels right in your hands and offers the features you need.

If you're looking for near-professional features at a consumer price, the E10 is one model you should certainly consider. I like the ability to turn off all the automatic settings and use the camera in full manual mode. Depending on your photographic background, this may not be important to you.

Through the lens or viewfinder?

Single-lens-reflex (SLR) cameras let you view the scene through the lens that will take the picture. Viewfinder cameras let you look through a little window that's near the lens. Viewfinder cameras are less expensive to make and, unless you take a lot of close-up pictures, the difference between what you see through the little window and what the camera sees is unimportant.

Most serious amateur photographers and pros prefer single-lens-reflex cameras, though. The E10 is an SLR. Add that to the fact that I like the way Olympus puts cameras together and you can see why I like their digital cameras.

For at least the past 25 years, I've always owned at least one Nikon camera, so you might be surprised to find that I don't own a Nikon digital camera. Nikon digital SLRs start at \$10,000. The Olympus E10 was released at \$2000, but is now down to about \$1800 and I've seen it on sale for \$1500 to \$1600.

Minolta has a camera that competes with the Olympus E10. So does Fuji. Minolta's Dimáge series is considered a SLR camera. *Faux*-SLR perhaps.

The Dimáge 7 is the latest model in this series and you can find it for about \$800 — well under the price for the E10, even when it's discounted. And the Dimáge is a 5 Mpxl camera. But it's not a real SLR in my opinion. The user doesn't see the scene through the lens. It's more like a video camera in that you look

What the heck is this?

Dead Trees is the William Blinn Communications newsletter. It's published whenever I feel like it, although I generally feel like it when I'm preparing the month's invoices. If you didn't receive an invoice with this newsletter, kindly contact me and we'll rectify that situation. Please note that despite the name, of the publication, I bear no particular animosity toward trees. The name is simply an acknowledgment that paper is made from, well, dead trees.

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into a viewfinder and the viewfinder *displays* what the camera is seeing.

In general, you'll pay more for SLR cameras because these cameras are more complex. The advantage of being able to see exactly what the camera sees is useful for all pictures, but critical only for close-up pictures.

Nikon digital cameras

One of the best known manufacturers of single-lens-reflex 35mm cameras still doesn't have a "prosumer" digital SLR. If you want to be able to view the exact image the camera will see and you want a Nikon, expect to spend \$5000 to \$7000.

But if you like the Nikon brand and you're willing to forego the SLR part, you'll find some excellent cameras in the \$500 to \$1000 range.

Say "Nikon digital camera" and a lot of people will envision the 995 model, the one that has the articulated body. Some of us call it "twist and shoot". The 995 packs a lot of features into a small package, but Nikon's newest digital cameras look more like traditional viewfinder cameras.

Two of the latest are the E5000 (5 megapixels) and the Coolpix 885 (3.2 megapixels). Both have 1:3 zoom lenses that cover a range from mild wide angle (equivalent to a 30 to 35mm lens on a 35mm film camera) to mild telephoto (equivalent to 85 to 115mm on a 35mm film camera).

The 995 is selling these days for about \$750, while the 5000 can be found for around \$1100 and the 885 for about \$550. Any of these cameras would work well for most home or business needs.

Both the E5000 and the 885 have meaningless 4x "digital zoom" built in, but this is a bow to marketing, not technology. If you buy a camera with digital zoom, turn it off and leave it off. Most of the cameras for serious photographers don't have digital zoom because serious photographers know digital zoom is simply a marketing canard.

Many digital cameras are unable to stop fast action or to allow the user to take multiple pictures in a short time. The E5000 has a top shutter speed of 1/4,000 second and allows shooting in short bursts of 3-frames-per-second up to 8 frames.

The Coolpix 885 can take up to 30 pictures in a burst, but only at low-resolution. It also offers the ability to record short movies.

The movie capability is important only if you need to be able to make short, jerky movies. Other features are essential: USB or Firewire connectivity would be first on my list. It's easier to transfer pictures by just pluging the camera in to the computer. A connector for off-camera flash is another good option.

It's a camera, not a CD player

One thing I've noticed about digital cameras is that the traditional camera manufacturers have done a good job of figuring out the electronics while the electronics manufacturers generally haven't quite figured out optics or camera ergonomics.

Over the past 30 years, 35mm film cameras have become increasingly automated. Initially auto-exposure wasn't very good and auto-focus should have been called "auto-blur" in the early days. But new complex logic circuits made auto-exposure virtually foolproof and current auto-focus models get the focus right even in dim light, where a human would simply have to guess. Motor drives advance the film automatically. Cameras have learned how to turn flash units on when they are needed and how to adjust them.

In other words, camera manufacturers are no strangers to electronic circuits.

If you're looking for a digital camera this year, and you have a budget of \$500 to \$1000, you have a wide choice of cameras from some very good manufacturers: Nikon and Olympus, Minolta and Fuji, Kodak and Pentax, and Canon and Sony.



Hey, buddy — got a light?

I recently received a question from a listener to *Technology Corner on WTVN* who wanted to know which kind of camera to buy to take good interior pictures. He wanted to use just the built-in flash.

Unfortunately, the best answer I could give wasn't what he wanted to hear. I had to explain that what he wanted to do isn't possible. The worst invention ever foisted on unsuspecting photographers is the on-camera flash.

There are several reasons for this:

- Light diminishes as the inverse of the square of the distance. In plain English, that means an object that receives a certain amount of illumination from a light that's 1 foot away. A light that's 2 feet away will have only 1/4 the intensity of the light that's 1 foot away. Close objects are too bright and distant object are too dark.
- On-camera flash is rarely good for more than 10 feet. When you attend a concert and see all of those hundreds of flashes going off, you're watching people waste their batteries.
- Because the on-camera flash is close to the lens, you're likely to get a red-eye effect. Think back to high-school physics: The angle of reflection is equal to the angle of incidence. Light from the flash enters the subject's eye, reflects from the retina (which is red), and comes right back to the camera. When you get the light away from the camera, the light that enters the subject's eye reflects in a way that does not reach the camera lens.

So if you want to take good pictures inside use ambient light if you can (and that might require a tripod).

In some cases, flash is necessary. If you need to stop motion and a long shutter speed will create a problem, you'll need the flash. But at least try to find a way to get the flash away from the camera. If the camera has a "hot shoe" or other connector, you can buy a flash unit that you can put on a bracket, or you can hold the flash in one hand and the camera in the other. Elevate the flash a foot or more from the camera for best results, or move it away from the camera entirely.

Happy clicking! ß