

COOLPIX

According to Marsha Kalkowski of Marion HS in Omaha, Nebr., the Nikon Coolpix was a versatile digital camera to use for school publications. "The photos were great for our purposes. Most of my staff photographers simply used the camera on the auto setting. The camera paid for itself in cost savings to the traditional darkroom in the first six months but was even more beneficial in time savings."



Buying a digital camera

An essential tool in the photojournalist's arsenal

In a recent, informal poll, nearly 40 percent of professional photojournalists reported that they shoot all of their daily shooting with a digital camera.

Is film dead? Ask those photojournalists, and they'll say yes. And may it rest in peace.

Megapixels

Early digital cameras had resolutions designed for image output on a screen, 640x480 pixels (or about 0.3 megapixels). Of course, this

meant that a yearbook-quality picture was small, only about 2.4 x 1.8 inches.

While these cameras were relatively inexpensive (\$300), they also lacked features such as fast shutter speeds that made them suitable for photojournalism work.

Quickly, along came the 2 megapixel craze. Equivalent in features to most conventional point-and-shoot cameras, these cameras were suitable for 4 x 6 inch images at yearbook quality and came



DIGITAL VIDEO

Michael Cutler shows off Canon's GL1 digital video camera, a viable alternative for low-end print work, Web work and video. The GL1 features a 20x zoom, the ability to shoot still as well as video images and even a flash photography mode. It retails for about \$2,500, slightly more than its big brother, the XL1, which retails for about \$4,500.

with flash attachments and even zoom lenses. Even now the 2 megapixel cameras such as the Olympus D490 and Kodak DC3800 targeted at consumers sell for less than \$400. Other models are smaller than a credit card.

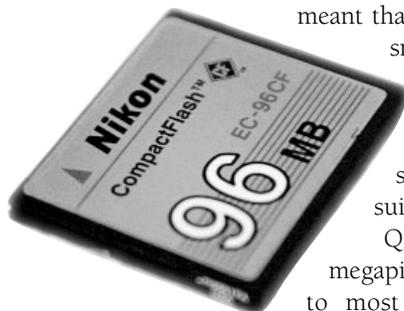
Moving up from there are cameras, such as the Olympus E10, which can produce a 4 megapixel image and has all the controls of a conventional camera.

The Olympus E10 includes a 4x zoom and supports both CompactFlash and SmartMedia.

However, for the true professional, there are only two choices – the Nikon D1 and the Canon 1D. At around \$4,500 for the body alone, the D1X, produces about 5.47 megapixels while the 1D produces about 2.74 megapixels but can shoot at up to five frames per second and can shoot at up to 1600 ISO.

Canon's high-end digital camera, which just became available in early 2002, produces a 10+MB image.

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An 8x10-inch photo with sufficient resolution for yearbook reproduction will contain about 5.4 megapixels.

BOTTOMLINE: *More pixels means more information and costs more.*

Storage

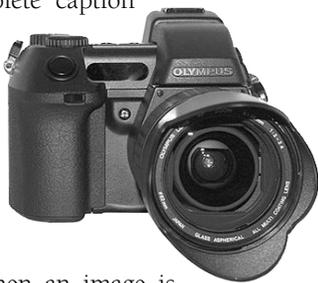
The CompactFlash Card has become the standard in storing images in digital cameras. Made by a variety of manufacturers, like hard drives, these cards come in a variety of sizes. Now cards that hold 448MB of information are standard. A 64MB card costs around \$150 and will inevitably come down in cost.

Most digital cameras that use CompactFlash Cards also come with adapters so these cards can be read directly into a computer's PCM-CIA slot.

The other standard for storing digital images in a camera is SmartMedia, used primarily in Olympus cameras. A 64MB SmartMedia card retails for about \$160.

Storage outside the camera, particularly for archival purposes, is also a major issue for photographers. How will you find and access images next year that you took this year? Or five years from now? Creating a database with information about each photo is helpful. But the most common method today is to store images on compact disc or DVD with complete caption information contained in Photoshop's File Info fields.

BOTTOMLINE: *Don't forget to budget for in-camera storage of images as well as for archival storage.*



Zoom lens

Just like in a darkroom when an image is enlarged, inevitably there is a loss of quality. That's why photography instructors spend so much time telling photographers to move up close and to fill the frame.

One way to "move up close" is to zoom in optically. Cameras such as the Nikon Coolpix 880, a popular point-and-shoot camera that produces a 3.34 megapixel image, has a 2.5x zoom. The Olympus D490 comes with a 3x optical zoom.

Just to confuse the issue, some companies also advertise a "digital zoom" - "plus 4x digital zoom," the ads read. Enlarging the image digitally is nothing more than enlarging it in Photoshop and results in a loss of image quality. It's the optical zoom that matters.

BOTTOMLINE: *Ignore digital zoom values, and pay attention to optical zoom values. ■*

OLYMPUS E10

Complete with a 4x zoom and complete with a f/2-2.4, 9-36mm zoom lens, the Olympus E10 generates 4 megapixel images. It uses both SmartMedia and CompactFlash media. The E10 also includes a built-in flash.

Negative scanners

Still develop film and then go digital

For schools entering the digital era, the negative scanner is the way to go. Developing film is inexpensive, even when done at Eckerd's or Wal-Mart. Rather than making the move to digital cameras, the negative scanner allows photographers to use all the equipment they use now.

The only downside is that it still requires the photographer to purchase film, and film isn't going to get cheaper.

Nikon, Polaroid and Olympus all make negative scanners appropriate for school use — scanners that have enough resolution and are durable enough.

Recently Nikon released a new scanner, the Super Coolscan 8000ED. With a 4000 dpi maximum resolution, it can produce files 396MB files, more than enough for even the largest of yearbook files. In fact, it's overkill and will retail for nearly \$3,000 when released.

The Nikon Coolscan III retails for under \$800. With a resolution of 2700 dpi, it can produce 28 MB files, good enough for most yearbook work.

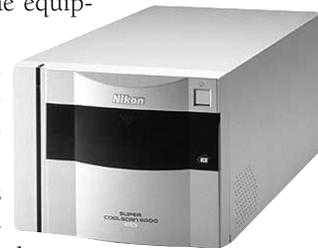
The Polaroid SprintScan 4000 scans 4000 dpi but retails for about \$1,600.

As with most digital equipment, with higher resolution comes higher cost.

In addition to considering the resolution of the negative scanner, the user should also consider the maximum density range. For example, some scanners can scan with a dynamic range of 0-3.4 while others scan with a range of 0-4.2. Clearly, a scanner that is capable of scanning with a greater range of tones can produce a higher-quality image.

Even things like scan time and the file formats accepted by the scanner can make a difference although most scanners are comparable, accepting 35mm slides and negatives and allowing adapters for scanning entire rolls of film.

Some scanners come built-in with software that automatically removes dust, scratches and fingerprints from the scans. Fearing that they might alter the image, people turn off these features, but the features are generally accurate and can save a lot of time when preparing dozens of images for an issue of the newspaper. ■



COOL

The Nikon Coolscan has long been popular with photojournalists. Nikon's top-of-the-line 8000ED features 4000 dpi resolution, 396 MB maximum file size and retails for just under \$3,000. More popular with schools, scanners such as the Coolscan III feature 2700 dpi resolution, enough for most newspaper/yearbook work. They retail for about \$800.