

TECHNICAL UPDATE

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AN INTRODUCTION TO THE "TECHNICAL UPDATE" COLUMN

With each issue of the "Technical Update" column I will attempt to summarize some of the recent technological developments relevant to subscribers of the *IALL Journal*. Areas of concern will include audio, video and computing announcements assembled from the more esoteric press and conference circuit that our subscribers may miss, yet which constitute the daily sustenance of us "nerdulent" types in the field. Since my own area of expertise is not so broad as to cover all aspects of language and technology, I will be relying heavily on your contributions. If you happen to read something or see a presentation of a new technology that you think might be interesting to our readers, *please* forward that information to me. (See my Internet address at the end of the column.)

Which brings me to an important reminder. As I have slipped further and further *away* from reality and *into* computer nerddom, the inevitable has taken place. I have begun to assume two things: a) everyone is as interested in this stuff as I am and therefore pays the same attention to it, and b) everyone has the same background as I. Both of these assumptions are false of course, but they underscore a fact which I believe

we must remind ourselves of daily as we "consume" the information available to us. That fact is: Common knowledge to one is often *not* common to everyone and *could* constitute significant time savings for many if they only had access to that information. Those of us whose daily lives revolve around a particular aspect of computing may be totally unaware of video projection developments, while those who live and breathe video may know nothing of a new device for capturing digital audio on the computer. As lab directors and supervisors, we *need* both pieces of information—but don't always share that which we assume to be common knowledge, when in fact it is common only to those who share our "obsessions." Sharing information about the technology we each deal with on a daily basis with those who don't could prove to be among the most valuable resources available to us as a group.

Enter the "Technical Update" column. The focus here will be on the technologies themselves and not necessarily on their pedagogical implications. I *will* attempt to

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confine myself and my contributors to reporting only those technologies with obvious pedagogical applications (though who am I to determine what a creative faculty member will see as useful! Sometimes I'll just *have* to include announcements of the "Geez, what could I do with that?" variety, just to be certain!). With respect to computing technologies, it is occasionally difficult to separate software from hardware developments, and so we will be reporting on utility software packages. Please reserve courseware descriptions and contributions for the "Courseware Reviews" column edited by John Huy. OK, let's get started! In this column we will be focusing on a relatively new technology, the Kodak Photo CD.

KODAK PHOTO CD

Many of you will have seen the television promotions for Kodak's new photo compact discs and the dedicated players for those discs. What you may not be aware of is the fact that those very discs are accessible from your computer as well and can serve as an enormous library of images for your courseware projects. First, let's take a look at the technology as a whole and how you'll begin to use it, and then we'll discuss using it with your computer.

Once upon a time amateur photographers had two choices: did they want prints or slides of their images? Now we have a third choice—Photo CD. When dropping off your rolls of film to be developed, many shops will now allow you to request that your developed images be pressed to a compact disc. Your film is sent to Kodak's special labs in New Jersey, and a compact disc is returned in about 10 days. The disc arrives in the familiar "gel" box you've seen used with audio CDs, but instead of liner notes, you'll receive one or more "contact sheets" of your images. These contact sheets consist of tiny "thumbnail" copies of all the

images on the disc, each numbered for your reference later. The disc itself isn't the common silver-colored variety you've seen with audio discs, but a golden-colored one.

Each disc can hold as many as 100 images in each of several sizes. The sizes in pixels are dictated by Kodak and not the end user: Wallet (128 x 192), Snapshot (256 x 384), Standard (512 x 768), Large 1024 x 1536), and Poster (2048 x 3072). Costs vary, depending upon whether you submit unprocessed film or previously developed slides or negatives. Another variable is whether or not you already have a disc. Believe it or not, you don't have to fill your disc the first time around. You can bring in another roll of film later and the new images are *added* to your existing disc up to a maximum of 100 images. This "multi-session" capability has certain ramifications which I will outline later.

Here are some average costs (your local photo shop may differ):

For comparison purposes, I discovered that I could have film developed and color prints made for \$2.39 plus \$0.31 per print at a local shop which does its own color processing. So, for a roll of 24 images, using the above figures, I could get color prints for \$9.83. For the same images on Photo CD, the cost would be \$20.01—more than twice the cost. If you already have a disc, your cost would be \$16.17. This might appear to be high, but take a look at the cost of a color slide scanner. Most are in the \$4000.00 range!

Kodak sells a dedicated player for their Photo CDs which connects to your television. I've seen these only in their own promotions and can't comment on their usefulness. For our purposes, however, the most valuable feature of the Photo CDs is the fact that they can be used with both Macintosh and Intel-based DOS/Windows platforms—with a few caveats. Most of the CD-ROM

drives on the market at the present time do not support the multi-session discs and some do not support the format at all. Neither IBM's nor Apple's (first-release) CD-ROM drive supports the Kodak Photo CD format and Kodak's tech support line claims never to have tested the software with an IBM drive at all. IBM claims that their model CD-ROM II supports the single-session discs. The current Apple CD-150 supports single-session discs and the 300i available in the new Macintosh IIvx supports multi-session discs (Apple plans to release an external model of the CD-300 in the first quarter of 1993).

Here are the minimum configuration requirements for using the Photo CD software (taken from the manual which ships from Kodak):

Windows:

- VGA or better
- 80386 or 80486
- DOS 3.3 or higher
- Windows 3.0 or higher
- 8 megs of RAM or more
- 8 megs of disk space or more
- CD-ROM XA mode 2 form 1

Macintosh:

- Macintosh LC or better
- 4 megs of RAM
- 4 megs of disk space
- 8-bit color card & compatible monitor (built-in card in the LC is fine)
- System 6.05 or later
- Apple CD-150 or equivalent (CD-300 for multi-session)

Thus, once you're sure your CD-ROM drive and miscellaneous computer hardware support the format, it makes the most sense to select the 100 images you want pressed to disc and press them all at the same time. Those drives which do not support multiple session discs can still read the first session, and thus if you fill your disc the

first time around, the issue is moot.

The software for accessing the images, PCDView, is available directly from Kodak for \$39.95. I haven't used the Windows version, but since the discs are identical in either case, I would hope the functionality is similar. When you launch the application, you select the disc you'd like to view and then request the contact sheet. This software then displays a thumbnail of each image on the disc. Double-clicking a thumbnail opens the image at snapshot size. The size can be changed by selecting a new size from the Size menu. Once an image is displayed on screen, you can either copy it or export all or a portion of the image in any of several common formats for use in other applications (on the Macintosh you can save in PICT, Encapsulated Postscript, or TIFF). I typically export the image as a PICT file for display later in a HyperCard stack. The latest version of Apple's QuickTime software (version 1.5) supports the Kodak file format directly. One could in theory display images directly from the CD from within your courseware project without using the Kodak software. In my experience this would be less useful since CDs are typically slower than a hard drive—opening a snapshot size image can take about 15 seconds. Saving the image to a separate file on the hard drive gives me better performance later when I display the images from within a HyperCard stack directly from the hard drive, to say nothing of the fact that no CD-ROM drive is needed at that point. The discs serve me essentially as non-volatile data bases of images.

The image quality of the Photo CD is startling. The resolution of the images is limited only by the resolution of your monitor and computer combination. A very high resolution monitor at 32-bit color (my personal set-up) produces an image as good as the snapshot color prints I'm capable of producing with my own camera (though a

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professional photographer could probably see and/or produce a difference). In any case, the quality of the images is *more* than sufficient for our purposes in the production of courseware materials.

Information:

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Contributions/suggestions for the "Technical Update" column may be sent directly to David Herren. Mailing address: Academic Computing, Middlebury College, Middlebury, VT 05753; email: herren@middlebury.edu