CAA NEWS

THE CASE FOR DIGITAL IMAGES

Christine Sundt is a visual-resources curator at the University of Oregon and a member of the CAA Board of Directors. She is also a founder and the first president of the Visual Resources Association.

A revolution is underway in lecture halls where technology, not ideology, is transforming the venerable old art-history classroom into something new, exciting, and digital. Brilliant digital images are replacing the slides that once held center stage, and traditional slide libraries, as image storehouses, are morphing into virtual-image banks. To many in the museum and university community, this transformation has been evident for a while, but recent news has brought it home to all of us. That something significant was happening became evident when Eastman Kodak announced that it would stop manufacturing slide projectors this year. Shock waves moved quickly through art and art-history departments and museums and left many wondering if the beloved Kodak Moment, captured for over a century in slide form, would be forever lost to digital.

Kodak's announcement need not terrify traditionalists who still wish to use 35-mm slides for teaching: one projector, the Ektapro, will be distributed beyond 2004 in Germany by Comm-Tec. The Ektapro projector is Kodak's top-of-the-line model, used widely in entertainment and advertising. Furthermore, none of the other companies making slide projectors—Leica, Rollei, Kinderman, and Vivitar, to name a few—have yet followed Kodak's decision to abandon film and slide projectors. Given the longevity of many slide projectors (some in our school are old enough to vote!), we may also expect that a vibrant market will emerge for used and refurbished equipment. And many manufacturers will continue to produce 35-mm film. Sales of such film, however, are flat; the day may come when it is used only by specialists.

To some of us, Kodak's news was not traumatic but joyful. Finally, we thought, a breakthrough for the advocates of digital images! Now administrators would have no choice but to furnish our classrooms with state-of-the-art technology, even though replacing the old with the new can be a sobering, expensive investment. Never again would we have to worry about misplaced slides. Masking, binding, labeling, and filing slides would no longer consume the time of visual-resources curators and their student workers. Faded and scratched slides would not need replacing.

The digital format is simple and elegant, highly transportable and accurate, versatile and—yes—demanding to maintain and preserve and ultimately just as volatile and troublesome as slides! The bottom line is that the digital is simply another format for images; the management

and care of digital files requires knowledge, time, and money, just as slides do. The difference is that the digital format seems easier.

But is it? What does "going digital" really mean? Is digital truly better than analogue? How long will digital files last? How do we justify the hefty price tag of the conversion when our library and departmental budgets for slides were already inadequate? To answer this, consider the following arguments and the facts behind them:

Digital imaging is the new imaging standard. Technology has been appearing in the art curriculum for several decades, most notably for images on videodisk in the 1980s and on CD-ROM in the 1990s. "Smart" classrooms have made it much easier for instructors to straddle formats and experiment with new ways to deliver content. But where are those videodisks now? How long will CD-ROMs be readable? When will a new archival format replace the TIFF (Tagged Information File Format) or JPEG (Joint Photographic Experts Group) digital files? Digital imaging is a moving target that requires diligent oversight and exponential knowledge. When a new format emerges, who will manage the conversion process to ensure that today's files are still readable in the year 2050? TIFFS may someday be replaced by a format with a greater dynamic range. JPEGs are "lossy," that is, they use a compression system that reduces the storage space needed for an image by discarding pixels not easily perceptible to the viewer. As the traditionalists know, a 35-mm slide—however pink, scratched, and mislabeled—is still an object that can be held up to the light and read.

Displaying digital images is easier than showing slides. For digital images and content delivery to be easy, the lecture room must be well equipped— and maintained—and the lecturer must be capable of troubleshooting technical problems, more complex than a stuck slide or a burnt bulb. Ease of delivery depends largely on the financial and personnel support provided and the software used to display the images in the classroom. The Microsoft PowerPoint program is easy to use and provides the basic capability to present a pair of comparative images, but it offers little in the way of technological refinement—no panning, zooming, or high-resolution images. Such features are available in specialized software designed for image presentations: Luna's Insight and the Madison Digital Image Database (MDID) are the best known of these. But institutions must either license this software or host the program on a local server, and there are costs associated with both. PowerPoint's ease of use and worldwide presence as a software standard are key factors in its quick, recent adoption by faculty and lecturers, but it falls short as a delivery or display application if quality, especially in large auditoria, is expected. As a boardroom (or small lecture room) application, it serves its purpose well, but in the large classroom, it is the lowest common denominator on the imaging scale.

You don't need a central repository for digital images, since they are freely available on the Internet. Images are everywhere on the Internet, and finding them becomes easier with search tools such as Google Image Search, Picsearch, and Yahoo Picture Gallery. If all you need are low-resolution images or thumbnails of the so-called art-history canon, these could be just right, assuming copyright issues are not a problem. Be careful, though, in selecting the digital image. Like a slide, a digital image can be inaccurate if it was scanned from an imperfect source, for example, a mediocre reproduction or a faded color slide, or if your digital camera's lens distorts at close range. Good digital-image software includes color-correction features, but does the "correction" know the true colors of the original work? When we assign the task of color correction to our student workers, can we be sure that they know how to adjust the colors? Will images of Picasso's Rose Period paintings be mistaken for faded pink slides? Correcting other distortions such as contrast, fuzziness, and parallax (skewed perspective) also entails knowledge as well as experience with image-manipulation software.

If your goal is to show high-quality digital images of a specialized nature, then your choices

are narrower. You may license high-resolution digital files from art or architecture image providers such as Archivision, Davis Art Slides, Saskia Cultural Documentation, and Universal Color Slide Company, or create your own images using a digital camera or by scanning images from printed books (though to do so may violate copyright in some instances). Digital images may be licensed as subscriptions from organizations such as ARTstor and the Associated Press (Accunet/AP Multimedia Archive), or they may be acquired individually through stock photography vendors, including Art Resource, Corbis, and Hulton-Getty Images. In our specialized world of art information, the chance of finding everything you need either online or through subscription services is slim. As the arts expand into multicultural and multidisciplinary directions, the traditional canon of core images also expands.

Digital images are not self-managing. A well-maintained digital-image archive should use consistent naming conventions (enabling users to locate an image file later) and should include a robust database-management tool to facilitate keyword and subject access. Without a system for retrieval and access, randomly stored digital-image files are like unlabeled slides in shoeboxes in various storage closets.

Once indexed, the images must be stored in a safe site and on secure media. CD-ROMs and DVDs, media commonly mentioned as "backups" for image files, are not archival. Remember 5.25 floppy disks? CD-ROMs will someday join the ranks of historical media, and the data stored on them will have to be transferred, or "migrated," to new formats. Can we be certain that a 2004 digital format will be readable in 2050 just as we can still "read" today Kodachrome slides shot in the 1940s?

Digital imaging is less expensive in the long run than slides. Who are we kidding? The cost of replacing slide projectors with digital projectors is not small. Digital projectors use more electricity, and their lamps are as much as ten times more expensive. (Yes, you may still have to change bulbs!) Networking and audio features are wonderful new teaching tools, but they cost something to install as well. The well-equipped classroom should not eliminate older media, since not every image can or should be converted to digital. Don't eliminate your traditional slide-projector hookups completely. Chances are that someone in your program will want to give a lecture with 35-mm slides, or will need to show both digital and analogue images together.

Everybody loves digital, and technology is second nature to today's students. The jury is still out. Technology is getting easier to use and more readily accessible than it once was. Remember the days when most faculty offices didn't have typewriters? Today, few faculty offices don't have computers! Digital technology has been a boon to the arts, and to teaching in general, but in order to conduct simple day-today discourse—e-mail, for example—we are heavily reliant on it. The old 35-mm slide is easy to use because we do not require technology to see it or to share it with others. The slide can be scanned today, and it remains ready to be rescanned in the future, when another new format or delivery system replaces today's standards.

Today's students and newer faculty members are indeed familiar with digital technology, having grown up with it. That all students benefit equally from technology has yet to be demonstrated or documented. Until then, the classroom remains a place where content—not the mode of delivery—is "smart."

—Christine L. Sundt, **csundt@uoregon.edu**