TECHNOLOGY

JUST ONE CLICK AWAY
That's how easy it is to submit your technology news to the Williamsport Sun-Gazette.
Visit our Web site at **www.sungazette.com** and click on **Virtual Newsroom.**

Digital shoeboxes

WAYNE PALMER

Bits & BYTES

Preserving digital images requires careful cataloging, regular backups

Back in the days when we all shot film, we often stored our negatives and slides in shoeboxes that were stuffed into drawers and closets.

Some us may have taken more care of our negatives by keeping them in some form of filing system, while slide users had all those trays nicely stacked in the closet taking up scads of space.

In reality, many of us would have a hard time locating the negative to a particular print. But there was still some security in knowing that there was this piece of film that you could touch and hold to the light to verify the picture you had taken.

With the transfer over to digital, that has all changed. Our precious family memories have moved from the tangible to the intangible.

The shoebox is gone, and so is the security of seeing the image. That unlabeled CD could contain images of an important family event or a bootlegged music CD. You don't know until you put it into your computer.

Also missing in this transfer is the stack of prints that you don't really care about, but don't throw away either.

With the explosion of digital, we are taking more pictures, but printing less. Now we don't have to have a print of every image we take. Just seeing the image is often enough to satisfy our needs. This has been felt in the film processing industry. Even with its ability to make prints from digital files, it has been continually downsizing with one major player recently withdrawing from the market.

The print is no longer the only way we display our digital images. Most cameras offer TV playback with larger-than-life images. You can now display images on an LCD device and simply pass it around. And of course there is the LCD screen on the back of the camera. The ability to see the image has replaced the need to hold it.

As we no longer have negatives and slides kicking around, what do we do with our digital images? Most of us will eventually download them to our computer and then erase the digital card for reuse. However, I predict that at the rate memory card storage is dropping in price while increasing in size, we may soon just store the files on the cards and simply go buy new ones when they're full. New cards that can store hundreds of images now cost less than a roll of film and processing.

So what happens to your images after they enter your computer? Do they become part of a vast digital wasteland? As we merge to all-digital storage, we may have to take a little more effort to retain our memories.

One of the strongest pieces of advice I can offer is to label your images and make multiple copies of them.

Most cameras simply assign a number to your images, which have no meaning when you are trying to sort them out. Image #12456 and image #12656 may be the same event, or may have been taken a year apart.

The numbering systems some cameras apply to their files have no bearing on the actual number of pictures the camera has taken and are just randomly assigned. When you download your images, at the very least group them into folders by event or subject and be sure to include a date. Don't forget, family reunions and birthdays become recurring themes. Dating folders will make finding files in the years to come much easier.

After you have labeled your images, I would also recommend that you make copies of your files. Hard drives fail, often without much warning. Consider a second drive to make redundant copies of your files. Also use CDs or DVDs as backups.

With that said, use caution with CDs and DVDs. They are not impervious to being damaged. When the CD came out, there were claims that it was more resistant to scratching than the LP it was replacing. In fact, they are just as susceptible to being damaged. The same is true for DVDs.

Both CDs and DVDs can fail even if you treat them with care. I use DVDs, but I do have concerns with them. They can become unreadable for what seems like inexplicable reasons, and the amount of data lost is much greater than with a CD. For that reason alone, I know of photographers who will only use CDs.

Personally, I have had more problems with DVDs than CDs. One spindle pack of name-brand DVDs I purchased was totally defective, all of them producing totally or partially unreadable discs. Unfortunately, the software did not detect any problems with the discs during burning.

So how do you make sure you pass the family memories on to the next generation? We can guarantee that over time we will move on to other recording formats. Even the venerable hard drive may be phased out for newer technology that does not entail moving parts. In the history of recorded media, few formats have lasted longer than 30 years, with film and audiotape being the exception.

By having your memories backed up in several formats, you should be able to move at least one of them onto whatever format we use in the future. And with those images in a digital format, they will look as good as the day they were taken. Faded images will become extinct, as long as we have a device that can read our files.

WAYNE PALMER/For the Sun-Gazette

Both of these disks show clear evidence of manufacturing defects. The left-hand disk is partially readable due to the "cloudy" areas, while the half-moon at "11 o'clock" on the right hand disk looks like a fingerprint but is a disk flaw.

Tips for safely saving your images

Camera Cards

- Treat camera cards with care. A simple drop to the floor can make them inoperable.
- Never turn off the camera or pull a card from a camera while the camera is still writing data to the disk. Use a standing five count after the blinking red light goes out before doing either.
- Don't delete files in the field or in camera, unless you don't have an extra card and are pressed for space.
- Don't swap cards between different cameras unless the card is empty. Swapping cards can cause them to become unreadable and you can lose files already recorded on them.
- Should your card suddenly become unreadable, stop using it. Your camera may give you a message that the card is empty or unreadable, but many times the data is retrievable.
- Keep an extra card handy. Just like film, you can never have too much.
- Use a card reader for downloading images if possible. If you make direct transfers from your camera and your battery should fail, you risk the chance of corrupting your card.
- If your computer does not have a USB 2.0 port on it, consider getting one as well as a USB 2.0 card reader. USB 2.0 is 40 times faster than USB 1.0
- Reformat your card, in camera, after clearing it.

CDs and DVDs

- Have your burning software verify files when burning files to CD or DVD. The process will take longer but is well worth it.
- Store CDs and DVDs in covers to keep them from getting scratched. Paper sleeves work fine.
- Use name-brand and archival quality discs. But remember, we will probably be using a different media format in a few years so archival may be a relative term. Also, don't assume all media is good just because it's name-brand.
- Use caution in pulling a disc from a jewel case. Applying too much pressure in pulling the disc from the center hub can cause the disc to crack and become unreadable.
- Don't place labels on your CDs or DVDs, instead use a Sharpie pen or pre-labeled disks. If you use a label, which is not perfectly placed on the disk, it can cause the disc to spin out-of-balance causing damage to the disc and even possibly the drive.
- If you have labeled a disc, and decide to remove it, use extreme caution. A careless tug may also pull up the information layer of the disc.

When you update to your next computer, you may want to see if your new CD/DVD drive will read your older disks. If not, you may want to pull and save your old drive.

- **General recommendations**
- Get into the habit of naming files or least storing files in folders with names and dates
- Store copies of important files in multiple locations
- For those really important images make actual prints that can serve as back ups.
- Consider using an external hard drive as backup storage, but be advised that there are those who consider external drives to be an inferior arrangement to an internal drive simply due to cooling issues. Many external drives operate at a hotter temperature because of a closed case and sometimes a very small or no cooling fan. This can lead to a shorter than normal life cycle of the unit.
- Think redundancy in preserving your important files.

— Wayne Palmer

Microsoft's attempts to stem piracy of Windows prompts a storm of complaints, even lawsuits

By ALLISON LINN
AP Business Writer

SEATTLE — When Microsoft Corp. said it planned to begin checking for pirated copies of its Windows operating system using the method it set up to send people security fixes, even some of the company's traditional critics could sympathize.

After all, although Microsoft rakes in billions, piracy of its flagship products remains a huge, costly problem, particularly in developing countries such as China and Russia. The Business Software Alliance estimates that 35 percent of software installed on PCs worldwide is pirated.

Nevertheless, 18 months after announcing the Windows Genuine Advantage piracy check, Microsoft faces controversy and backlash, including two lawsuits. Some say the company clumsily handled several elements of the program, including a key privacy issue.

"They have a right to say, `If you want patches from Microsoft, you know, you should let us make sure you're not running a pirated copy of Windows,'" said Gartner analyst John Pescatore. "That's a valid claim, and with the Windows Genuine Advantage tool, I think, they tried to go a little too far."

Microsoft introduced the piracy check in mid-2005 as a condition for downloading security fixes and other software, such as anti-spyware technology, from its Web site.

Now the anti-piracy check is also being sent to customers whose computers receive security updates automatically. For now, users can take extra steps to opt out of the piracy check. But Microsoft strongly encourages people to run it, calling it a "high priority update,"

ASSOCIATED PRESS

Microsoft wanted to cut down on the amount of revenue lost to software pirating, but some say the company didn't play its cards right.

and says the check might become mandatory at some point.

Once installed, the program checks whether it believes the user's version of Windows is legitimate. It gathers information such as the computer's manufacturer, hard drive serial number and product identification.

Microsoft still offers important security fixes even if the company alleges the version of Windows is pirated, although those users can't get non-security downloads, such as a test version of the new Internet Explorer browser. Those users also receive a barrage of notices that they are running an illegal copy of Windows.

While Microsoft had told users the new software would gather information related to piracy, some people became alarmed when they discovered that the software also was performing a daily check-in with the company.

Microsoft said the daily "call home" was a safety measure designed to let the company shut the program down quickly if something went wrong. But critics saw the undisclosed communications as a breach of privacy and trust.

Marc Rotenberg, executive director of the Electronic Privacy Information Center, said the concern is that users did not know about or control the interaction.

"It feels very much like a digital trespass _ you know, someone is getting access to your system without your consent," he said.

Microsoft conceded that it should have told users it was making the daily connection. It has since discontinued the daily check and revised its disclosures. The system will, however, continue to occasionally check in with Microsoft to make sure it still believes a person's software is legitimate.

Even so, although many had sympathized with Microsoft's original anti-piracy efforts, to some this misstep was enough to call into question the entire program.

"To use the security mechanism to install marketing software that is designed to increase Microsoft's revenue but actually interferes with some people's use of their PCs is a real breach of faith with customers," said Brian Livingston, editor of Windows Secrets, a newsletter and Web site that offers tips for using Microsoft software.

He thinks the episode will have a long-term, negative effect on how well people regard the software maker.

"The trust has been broken," he said.

Microsoft faces two federal lawsuits over the software, both of which accuse the company of violating laws that seek to combat spyware. The lawsuits seek class-action status.

Microsoft spokesman Jim Desler insists the piracy check is not spyware.

"These lawsuits are without merit and they really distort the objective of our anti-piracy program," he said.

Pescatore, the Gartner analyst, said he thinks Microsoft has found a good middle ground by backing off on the daily checks, and he doesn't think most users will be affected by the controversy.

Microsoft has taken great pains to improve its privacy policies since it came under intense fire about five years ago for a system called Passport that sought to store all sorts of personal information under one log-on. The program was scaled back considerably and, despite some ongoing concerns, Rotenberg said Microsoft has come to play a leading role in privacy issues.

"Since that time you can say simply, they got privacy religion," Rotenberg said.

But he thinks Microsoft has misstepped with the privacy check, and should separate it from the system for sending security updates.