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How to Backup Securely

by Mark Tiongco

This Tech Tip addresses some frequently asked questions about how to safeguard your computer data on a personal and business level. It assumes that you DO NOT have gigabytes of music and movies that require extensive security measures to protect.

1. How should I begin to secure important data on my desktop computer or laptop?

First, it makes sense to designate 1 or 2 specific folders on your computer as the main folder for confidential file back-ups for several reasons. If you have to do a quick back-up, all you do is copy that folder to an external drive for an instant back-up.

Second, It provides a centralized location for all important data. Instead of having to hunt down the menu, sub-menu, sub-sub-menu of where you normally download company financial spreadsheets, you can set your browser and programs (such as QuickBooks, etc.) to save/download all important files to this folder.

Third, let's say you only save *all* important files on a flash drive/external hard drive. If your notebook gets lost/stolen, the thieves only have the programs and not the actual confidential files which are on the cheap flash drive.

2. Great, now how do I actually back-up my designated BACK UP folder(s)?

Here's where it gets tricky. You have several back-up options such as:

- A. Cloud – Services such as Carbonite and Mozy offer low-priced back-up solutions. You basically upload all your confidential files to their cloud servers and are able to access them anywhere in the world where there is Internet access. The main issue is that, from a business security perspective, you have no idea where your data is stored. If, for example, it's stored in a server farm in China which gets hacked, then you're in trouble.
- B. External Hard Drives – These nifty devices come in portable 2.5" and larger 3.5" flavors and offer more than generous dumping grounds for all things important. Once you plug it in, your OS recognizes it and pops you up with a folder showing it as a (giant) external drive with a letter (i.e. G:) Some even feature OTB (One Touch Backup) so you press one button and it backs up either your entire system or certain portions of it. Some external hard drives offer plug-in encryption that prevents unauthorized access. The issue with this solution is that you have to lug it around, which means it has a chance of getting lost/stolen and the formality of performing a back-up might become time-consuming to some.
- C. Flash Drive – These little drives are more nimble, have zero moving parts and are highly portable. Unfortunately, this is also its Achilles' Heel as its relatively small size makes it prone to becoming misplaced or stolen. Also it does not have the capacity of a larger external drive. The good news is that some flash drives have built-in encryption which can be useful if it lands in the wrong hands.



- D. Home/Office Network Attached Storage Drive – Also called NAS, this is an excellent solution for comprehensive back-up protection as these hard drives function as dumping grounds for an entire home or office network. It provides a centralized location for files, folders and documents which any connected computer can access and come in large drive sizes. However, security precautions should be utilized if the NAS has built-in measures as an unsecured NAS may be prone to prying eyes. For example, a NAS without security protocols activated while connected to a home Wi-Fi network is prone to being breached. Because of this, it's crucial to configure the NAS security as well as the router/network security for optimal protection.
- E. Backing up to CD/DVD/Blu-Ray – Optical media back-up is actually a very cost-effective solution because CDs and DVDs are very cheap nowadays. Furthermore, if you're looking to close the books for a certain month on your business, burning to a CD-R or DVD+R sets the data in stone so it can't be manipulated on the disc. The problem is that if you have lots of data to back-up, the formality of using several CD-R or DVD-R discs to save might also become time consuming. In addition, you would have to make sure said back-up discs are placed in a safe place where the chance of it getting stolen is minimized.

3. Which back-up method should I pick?

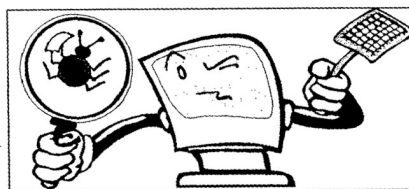
While the above solutions offer many ways to back up your confidential data, the best way to minimize a data breach/loss is to follow a combination of multiple back-up solutions and proactive behavior. For example, it would be a good idea to store important sensitive data on your flash drive and encrypting it with TRUE Crypt while also saving duplicate file copies on your home NAS drive via secure VPN connection. If your flash drive is lost/stolen, True Crypt prevents the drive from being used without proper credentials and you can still access the very same duplicate files on your NAS server.

Regarding proactive behavior, you should be mindful of back-ups so you don't lose something you wish you saved 2 weeks ago.

There are also programs out there that can help secure data such as:

- Folder Lock – Locks and can hide any folder you wish from prying eyes.
- True Crypt – secures drives with extensive hardware encryption.
- Acronis Drive Cleaner – Completely erases all drive data with several methods (DoD, Gutmann method, etc.) – works great if you're planning to get rid of old computer hardware.

Remember, it's all about being proactive and being mindful of what back-up security solutions to use for your personal or business needs!



Paragon Drive Copy 11 Professional

Reviewed by Terry Currier

President of the WINNERS WINDows usERS group, Fountain Valley, CA

Paragon Drive Copy 11 Professional is sort of a do-all utility for anyone wanting to copy a hard drive. What I used it for was to clone my hard drive to an external drive connected via USB. I have a 1.5TB drive in my computer and right now I'm using about 450GB of that space. There are other programs that will clone the drive, but you have to have the same size drive to copy it to. The Paragon Drive Copy did great copying it to the 500GB drive with no problem.

I set it up to Migrate Hard Disk. I started it before going to bed and expected the process to still need some time in the morning. But, it was done when I checked it in the morning. When I first backed up the drive with Rebit it took much longer. To be fair, though, Rebit creates a database and saves the files in a special way.

Using Paragon Drive Copy is the ideal way to migrate to a larger drive, or to an SSD drive. Another use is, as they call it, migrate hard drive to container. It creates an image file of your drive making it so you can create a copy onto another computer. This is what many companies will do in setting up new computers so they all match.

One thing we should all have is a recovery disc. Their Recovery Media Builder can help you:

- Prepare the Linux/DOS recovery environment (included in the installation package) on external media (CD, DVD, or flash memory) to boot and run utilities under Linux or PTS DOS, and that way to get access to your hard disk for maintenance or recovery purposes.
- Create from the master CD the Linux/DOS or WinPE (Windows Pre-installation Environment) recovery environment on a CD/DVD disc, or flash memory.
- Prepare a bootable recovery environment from any ISO image, including their WinPE 3.0 image

Paragon Drive Copy Key benefits:

- Ultra high-capacity HD support (>2.2TB) migrates existing system from Master Boot Record (MBR) to modern Retained GPT (GUID Partition Table also known as Hybrid GPT) HDD and gain access to complete HDD capacity
- All partitioning (resize, move, creation) and copy with resize operations now take partition alignment problems into account with all volumes being automatically aligned by sector
- Dissimilar hardware support allows migration of existing system and makes it bootable in a new environment
- Copy features – copy a full hard disk or a separate partition, and resize a partition while copying
- Supports all major virtual machines: MS Virtual PC, VMware Workstation, Oracle Virtual Box, VMware Fusion;
- Basic partitioning features

- Refined User Interface – improved two-level user interface (Easy/ Advanced) to satisfy needs of every customer
- Boot Corrector
- Empowered data safety and disaster recovery tools for both physical and virtual Windows environments.
- Updated wiping technologies can efficiently dispose of data on any HDD, SSD, flash-drives and laptops.
- USB 3.0 ready: New USB 3.0 port grants the possibility to access to external HDD and Flash drives on the new high-speed version of the traditional serial port

Drive Copy 11's interface is good and easy-to-understand. The help that comes with it is very good with illustrated instructions to help the user.

Paragon Drive Copy 11 Professional is available for \$39.95 via download from <http://www.paragon-software.com/home/dc-professional/>

System Requirements

- Operating systems: Windows XP/Vista/7 and XP SP2/Vista/7 64-bit
- Internet Explorer 5.0 or higher
- Intel Pentium CPU or its equivalent, with 300 MHz processor clock speed
- 128 MB of RAM (256+ recommended)
- Hard disk drive with 100 MB of available space
- SVGA video adapter and monitor
- Keyboard
- Mouse

Additional requirements

- External USB hard drive to store data

From the June 2011 issue, The Notepad.

Free Backup Software from EaseUS

by Ira Wilsker

Last week I wrote about the imperative necessity to frequently or constantly backup our hard drives. I referenced the three most important words in computing, "Backup! Backup! and Backup!" I warned about Murphy's first law of computing, "A properly backed up hard drive will never fail; but the first time that you do not have a current backup, it will always fail at the most inopportune time." Apparently some of you paid attention, because I received several emails and phone calls from readers asking for specific recommendations, predominantly for free backup software. I tried a few of the free backup utilities, and created a preference for



EaseUS® Todo Backup Free
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 backup solution
[Learn More>>](#)

EaseUS Todo Backup Free 3.0, available for download at www.todo-backup.com/products/home/free-backup-software.htm. This free backup utility will run on almost all Windows systems, including Windows 2000, XP, Vista, Windows 7 (all 32 & 64 bit systems), with FAT or NTFS file systems, and with RAID or dynamic disks.

EaseUS Todo Backup Free 3.0 is a very complete product, offering just about every backup function in a single free utility. This utility can create a hard disk image which can be used to totally restore the contents of a dead hard drive to a new hard drive, allowing the user to be up and running in a matter of minutes. Being in a disaster prone area, subject to the whims of hurricanes, tornadoes, and brush fires, disaster recovery should be of concern to all users, and this backup software makes fast recovery possible. Viruses, worms, trojans, physical wear and tear, power surges, and accidental damage can harm or destroy a hard drive, and this software can be used to recover that data, provided that a backup had been created in a timely fashion. Unlike some other products, EaseUS Todo Backup Free can automatically create and maintain (update) the image file in real time without user intervention. Because of this beneficial feature, the user who has this feature activated, will always have a current image backup that can restore the entire hard drive in the event of a catastrophic failure. For those who prefer to schedule backups, they can be run at a predetermined time, now, daily, weekly, or monthly.

While I frequently create an image file capable of restoring an entire hard drive, including operating system and program files, I mostly create a file backup where my data files are backed up. With this feature, data files of all types, including documents, spreadsheets, images, videos, email, music, and other data types can be instantly recovered or restored if necessary. If desired, entire folders, along with all of their contents, can automatically be backed up. I cannot count how many times in recent years that I have had to recover files from the backup, which is a great convenience. The EaseUS Todo Backup Free can automatically create and maintain both differential (files that have changed since last backup) and incremental (newer versions or changed files) backups, such that the user does not have to manually create and update backups unless desired.

EaseUS Todo Backup Free makes it very easy to recover from the disastrous loss of data caused by a hard drive failure, provided that a backup had been created. The software can easily create a bootable CD, DVD, or USB drive with either a Linux or WinPE operating system (included) that can boot the computer and then run EaseUS Todo Backup utility. Once booted, this utility can read the recovery media, and then recreate a hard drive, all with a single click. Typically, following a hard drive failure, the hard drive is replaced. Since the newly installed hard drive is effectively blank, it needs to have an operating system, programs, and data reinstalled in order to restore complete functionality.

The previously created image file is an exact copy of what was on the original hard drive when the backup was created, so restoring the image to the new hard drive results in a fully functional hard drive complete with operating system, programs, and data files. In terms of

usability, it is just as if the original hard drive was still functional, but now the computer is running with a new hard drive. If instead of just a hard drive being replaced, other major components are replaced, or an entirely new computer is obtained, this software can install the previously created image file on the repaired or new computer, enabling rapid use of all previously installed programs and data. This same process can be followed if the user upgrades his computer with a larger hard drive, and then restores the operating system and all program and data files from the image backup. Likewise, the user who purchases a new computer can use this software to install existing programs to a new PC, a process called "Migration."

While my personal preferences are to create backups to multiple external USB hard drives, and data CD and DVD discs, EaseUS Todo Backup also supports backing up to remote off-premises backup services, network attached storage, FTP to remote servers, and almost all other forms of backup media, devices, and services. Some users prefer to use a virtual machine (memory resident), and this backup utility supports that option by being able to convert the backup image file to .VMDK (VMware virtual disk format) or .VHD (for Virtual PC) and then mount into a virtual machine directly. While most users would likely just restore the image to a new hard drive, some users may prefer the virtual machine method.

In terms of security, this software offers several options. Access to the backup, regardless of media used, may be restricted by the use of a password, giving some protection from unauthorized access. For even greater security, 256 bit AES encryption of the backup is available, making it almost impossible for unauthorized users to be able to read the backup files. Sometimes users may want to securely erase all or parts (folders and files) of a hard drive, making it nearly impossible to recover erased files; EaseUS Todo Backup offers a secure "Wipe" function that securely eliminates content from the hard drive.

In experimenting with EaseUS Todo Backup Free 3.0, I found it to be a most comprehensive and complete backup utility, that can backup and recover from and to any combination of hardware and systems. In response to my readers who asked for a recommendation for a free backup utility, this may be the one to try.

WEBSITES:

<http://www.todo-backup.com/products/home/free-backup-software.htm>

<http://www.easeus.com/disk-copy>



The Fuss About "Net Neutrality" Explained

Q. Can you explain Net Neutrality and what all the fuss is about in layman's terms? I am against the government running anything, but I don't understand the issue here.

A. It's a complex subject about which volumes have been written, but in its simplest form, Net Neutrality is the principle that says that all information flowing across the Internet should be treated equally.

With more people streaming data-rich video, Skype (Internet telephone), playing online games, watching full-length movies, and using social networking sites such as Facebook, Twitter, etc., the Internet itself faces significant traffic congestion, which can manifest itself in sluggish or even nonexistent access to Internet-based data.

Questions then arise such as, "Should Internet access providers be able to sell multi-tiered access to accommodate heavy users? Should sites that generate massive traffic and thus contribute to the congestion pay additional fees which would undoubtedly be passed on to consumers? Should the historically free Information Superhighway become a toll road?"

The U.S. Government is examining Net Neutrality and its financial, legal, and social implications. The debate then becomes, "Do we need federal intervention to ensure fairness, or is this an issue for the free market to work out, bearing in mind that the Internet itself is global, so the U.S. Government's jurisdiction would be limited to U.S.-based providers?" The debate and discussion to follow promise to be heated and prolonged, so stay tuned.

Q. I have Firefox configured to automatically open four sites when I launch it. Can Internet Explorer perform the same function?

A. Start by creating a tab (CTRL + T), type in an address and go to that site. Repeat the process for each site you want to open automatically.

Let's say you create four tabs to display the four different sites you display in Firefox. If you want all four to appear when you open IE, click the little down arrow next to the House icon (Home page) on the toolbar and select "Add or Change Home Page." Click "Use the Current Tab Set as your home page," select "Yes," then close IE. That's all there is to it.

Quick Review: To configure Firefox to open multiple pages, click Tools > Options > General tab. Under Startup, "When Firefox starts:" select "Show my home page." In the Home Page field, enter the URLs of the sites you would like to launch automatically, separated with a pipe mark (|), which is vertical line, usually located above the back-slash (\) key. Click OK when you're done.

Q. I know how to delete individual files, but I can't remember how you said we can use the keyboard to highlight a block of files for moving or deleting. Thanks, Mr. M.

A. To select multiple files, hold down the SHIFT key and click the first file to select it, then scroll down to the last file and click that to highlight (select) all files in between.

If the files you want to select are non-contiguous files – which is just a fancy-shmancy way of saying files not located next to each other – use the CTRL key instead of the SHIFT key to select specific files.

Mr. Modem's DME (Don't Miss 'Em) Sites of the Month

Bidding for Good

This site brings together cause-conscious consumers and organizations attempting to raise funds to support their various missions. All of the items found in their ongoing auctions raise funds for the nonprofit running the auction, so consumers' bidding dollars support causes that are important to each individual.

www.BiddingForGood.com

Book of Odds

This Web site details the odds of everyday life. You'll find interesting data ranging from the odds of becoming a YouTube celebrity, to the odds that you'll wind up old, surrounded by cats, and writing newspaper columns. (Hey, wait a minute!) This site provides an interesting look at odds and probabilities. For example, did you know that the odds that a pet cat is allowed to sleep in its owner's bed are 1 in 1.49? I hate to disagree with this site, but around my house, the odds of a cat sleeping wherever it wants to, whenever it wants to, are 100 percent. Use the site's Search field to search for topics of interest.

www.bookofodds.com

Typewar

So, you think it's easy to tell the difference between fonts, do you? Here's your chance to find out. This site will present an example of a certain typeface. Your mission, should you choose to accept it, is to identify in which of two choices the letter appears. It's not as easy as it sounds. To let you know how you're doing, the site keeps score. No wagering, please.

<http://typewar.com>

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Choosing a Mouse

by Sandy Berger

CompuKISS Newsletter

The mouse is a useful computer tool. Here's a little history combined with information on the many different types of mice available today.

Many people seem to be curious how the mouse got its name. In the early 1960's, a man named Douglas Engelbart was fascinated with a theory he called "human augmentation technology," an idea that the computer should be used to enhance human performance. Up to that time, computers were useful only to military and scientific communities. In 1968, Engelbart made an input device to help people interact with the computer.

The original mouse was a small rectangular wooden box with a cable running to the computer. Since the cord looked like a tail and mice are known for scurrying along a surface,

this new device quickly became known as a mouse. The mouse turned out to be one of Englebart's most ingenious ideas. Yet, Englebart's original ideas were rejected, only to be resurrected later by others who took both the credit and the financial rewards. Because it frees the user from having to exclusively use the keyboard, the mouse is recognized as one of the great breakthroughs in computing.

The basic functionality and size of the mouse that we use today has changed little since 1968, but there have been changes in the technology behind the mouse. Older mice worked by a tracking ball on the bottom of the device. If you are still using this type of roller ball mouse, it is time for an upgrade.

The newer type of mouse is the optical mouse. The optical mouse uses a tiny camera to take thousands of pictures every second. It employs a light-emitting diode (LED) that bounces light off the surface on to a CMOS sensor that is similar to the sensors used in some digital cameras.

Optical mice have several advantages over the traditional roller ball mice:

- They have better tracking and a smoother response.
- There are no moving parts to wear out.
- While dirt gathered inside of the ball and roller bars of traditional mice interfering with the tracking, the optical mouse is sealed and there is no way for dirt to get inside the mouse.
- They can be used on most surfaces without a mouse pad. The only exception is a mirror, glass, or extremely shiny surface.

Most optical mice have a red light that shines through the bottom of the mouse. The light can actually be any color. I have even seen a few that cycle through various colors, although I don't really see the point in that because the bottom of the mouse is usually not seen.

One of the newest types of mice is the laser mouse. This is a type of optical mouse that uses a laser beam instead of an LED light. The laser beam is invisible, or nearly invisible, to the human eye. The laser mouse is more precise and accurate, but also more expensive. It's great for professional graphic designers and some gamers might find them useful, but the average computer user won't see enough difference to warrant the increased cost.

So if you are still using a mouse with a roller ball on the bottom, you might want to upgrade to an optical mouse. Or buy a new computer, most of which now come with optical mice. You will see a difference.

Oh, and when you get to the store, be prepared to spend a little time in making a decision. You will find designer mice in red, green, blue, purple, and other colors. You will also see mice in many different sizes with a large variety of finishes. The most important thing, however, may be for you to choose a mouse that fits your hand and feels comfortable.

Also remember that there are other input devices that can be substituted for a mouse. There are trackballs, joy sticks, and touch pads that can be used if you don't find a mouse comfortable. There are also specialized devices that can be used for people with disabilities.

Some of these devices can even adjust for shaky hands and other dexterity problems. I use a specialized mouse called an Aerobic Mouse (www.aerobicmouse.com) that is especially designed for people with arthritis and carpal tunnel syndrome. It's a big, ugly mouse, but I love it. It keeps your hand in a hand-shake position that alleviates the twist in your wrist that can cause pain if you use the computer a lot or have carpal tunnel syndrome. It also steadies the hand, making using the mouse easier.

So take your time and find the mouse or input device that is right for you. Today, most mice attach to your computer through the USB port. This is a nice feature since it means that if you and your honey want to use different mice, they can both be plugged in at the same time and each person can have constant access to the mouse of their choice.

Tips & Tricks

by Constance Brown

President, Canton/Alliance/Massillon Computer User Group, OH

Every once in a while, it is good to review some basic principles and concepts of using a computer. One question my students often ask is, "How do we know whether to single click or double click."

Well, there is not a hard and fast rule, because you can adjust computer settings as to how your computer responds to clicks. Out of the box, the computer is set up so that you usually double click on an icon to open a program. Once you are in a program and want to edit or save or perform any number of other tasks, you generally single click on those tasks.

Many times new users who are not really used to a mouse, will try to open a program by double clicking on the name of the program instead of the icon. Often they get the Rename option instead of opening the program. Point to the icon to double click and this will not happen. Not everyone develops a good user-mouse relationship. If you absolutely cannot get the double click to work for you, you can highlight the icon of the program you wish to open by clicking only one time. Then click the Enter key on your keyboard.

Sometimes you want to move an icon on your desktop from one place to another. One way to do that is to click and drag. How do you do that? Left click on your mouse and hold it down while moving the mouse to point to the new location where you wish to drop the icon. Once you are there, lift your finger off the mouse and the object will stay where you put it.

Many times we enjoy personalizing our computers by changing the desktop background. To do this, go to the Windows button that opens the Start menu on the newer computers. If you have an Older computer, click on Start. Click on Control panel. Click on Appearance and Personalization. A new window opens. Here you will need to click on Change Desktop Background. This link is found under the larger grouping titled Personalization. You will be able to select from several pictures included with your copy of Windows or browse to one of your own photos and set it as a background.

Sometimes, as the number of candles increase on our birthday cakes, we need to enlarge

the text found on our desktops beside the icons that we use. While you are in the Control Panel and looking at Appearance and Personalization, you may want to click on Display and adjust the text size to a more readable size.

Have you ever tried to make a correction in a document you were writing only to have letters deleted every time you tried to insert new ones? Perhaps you misspell the name Kendra by omitting the letter “e” and you place the insertion point between the “K” and the “n” and type the letter “e.” To your dismay, you now are missing the letter “n.” So you type “n” only to lose the “d.” What has happened? Your insertion key has gotten turned off. Click on the insertion key once to enable it. Now you will be able to insert the missing letters.

From the July 2011 issue of The Memory Map.

The Three Most Important Words in Computing: Backup! Backup! Backup!

by Ira Wilsker

We have all heard the common and trite clichés that the only things that are for sure are "death and taxes." For computer users, regardless of operating system or brand of computer, there is a third "truth" and that is that computer hard drives will eventually fail. Hard drives, regardless of brand and reputation, are electro-mechanical devices with a lot of very fast moving parts, motors, and some type of electronic controller that makes it work. Heat, physical shock (like dropping on the floor), electrical problems (power surges), and normal friction and wear can cause hard drives to deteriorate followed by a likely catastrophic failure.

Many of the more modern hard drives incorporate "SMART" technology (Self-Monitoring, Analysis and Reporting Technology) which monitors the hard drive for reliability issues, and notifies the user if it detects a pending failure. Once warned, the user should immediately verify that the drive is properly backed up, and then quickly consider replacing the drive. Many of the hard drive manufacturers provide free SMART monitoring software, or a similar utility. Seagate, for example, offers its free "SeaTools" utility that "... includes several tests that will examine the physical media on your Seagate or Maxtor disk drive and any other non-Seagate disk drive." A 17mb download, this free utility will run on almost any brand of hard drive, and display its findings such that the user can have real-time information about the condition of his hard drive. There are many other hard drive monitoring utilities available, both free and commercial. For free hard drive monitoring software, consider any of the top rated hard drive monitoring utilities listed at techsupportalert.com/best-free-hd-health-monitoring-and-diagnostic-programs.htm. I have been happy using a \$15 program (sometimes offered as a free promotional download) "Ashampoo HDD Control," which provides comprehensive hard drive monitoring services, as well as drive cleaning and defragmentation functions.

One of the earliest fables (with some truism) about hard drives is a component of Murphy's laws, which says, "A properly backed up hard drive will never fail; but the first time that you do not have a current backup, it will always fail at the most inopportune time." This has evolved into the current truism that says, "The three most important words in computing are Backup! Backup! and Backup!" On my computers, I routinely copy my critical data files to USB flash drives, burn them to CDs, and use a file copy backup utility with a high capacity USB external hard drive. Actually, I use multiple backup devices for critical data files, because I like the idea of redundancy, and backup media and devices have become incredibly inexpensive. During the hurricane evacuations for Rita, Gustav, and Ike, the very first item I packed was my external hard drive with my latest backup, along with some backup CDs with additional copies of the most critical data files from my desktop computer.

There is an abundance of good quality backup software available, and for several years I have been using NTI Shadow (www.nticorp.com), a \$40 product which transparently maintains backups in real-time of all of my critical data files on my external USB hard drive. When first installed, Shadow automatically copies all selected file types to the chosen backup device, and then maintains the backup set without any necessary user intervention. As soon as I save a file to my hard drive, Shadow instantly copies the file to my backup device. For sequential files, such as word processing or spreadsheet files, Shadow can selectively save each version, as it is updated or saved, preserving the older versions in case they are ever needed. I use Shadow to automatically maintain or "synchronize" data files, photos, videos, music files, email, and other non-system information. Since all of the files are saved in native format, the backed up files can be read, copied, or opened, with no special or proprietary software required. Over the years, I have been very satisfied with NTI Shadow, and continue to use it.

For those who prefer free software, there are many excellent programs available, all with different feature sets and offering different types of backup (www.techsupportalert.com/best-free-backup-program). Tech SupportAlert.com has guidance to help the user select the type of backup program desired. A file backup program does precisely that, maintains copies of files. A full backup is a type of backup where the entire hard drive is copied, often by creating an exact digital image of the hard drive. A differential backup, after a full backup is created, only backs up new or modified files. An incremental backup is somewhat like a differential backup, but only backs up the files that were created or modified since the last full or incremental backup.

Using a free software product, Paragon Backup and Recovery (Advanced) Free edition (www.paragon-software.com/home/br-free) I periodically create an "image backup" which basically creates a bit by bit digital image of my entire hard drive as it is at that instant, and writes that image to my external USB hard drive. The software provides for the creation of a bootable Linux recovery CD which contains the drivers and utilities necessary to restore the hard drive. In the event of a catastrophic hard drive failure, I can purchase a new hard drive, install it in my computer, boot the computer with the recovery CD, and using the image file

on the external drive, recreate my hard drive precisely as it was at the time of the backup, with all programs and data files intact.

Once the image file is installed, the computer will boot and run just as it did before the hard drive failure, but with a new hard drive. Other than the time, expense of a new hard drive, and a little aggravation, my computer will be fully functional just as it was prior to the hard drive failure. This is explicitly the primary reason for having a current image backup. This Paragon Backup and Recovery software can also create and maintain file level backups, perform other backup functions, and is a comprehensive backup utility. For most users, this Paragon software will be most adequate, as it is capable of performing all desired backup and restore functions.

Other top-rated free drive imaging programs are listed at www.techsupportalert.com/best-free-drive-imaging-program.htm. I strongly encourage all computer users to frequently create an image backup, such that a failed hard drive can be easily replaced and all files and programs restored. Since I use multiple external USB hard drives, I sequentially create an image on one external drive, and then use a different external drive for my next image backup. By doing this I always have at least one functional image capable of being restored, just in case there is a problem on one of the external drives. If that happens, I may not have the most recent image file, but at least I can be back in service with minimal loss. Since my data files are continuously backed up by Shadow (I keep a redundant set of those files as well), between the image file and my Shadow files, it is unlikely that I would lose anything of significance.

There is no need to suffer a hard drive failure with the resultant loss of all programs and data files. With the availability of several excellent free hard drive monitoring and backup utilities, as well as several comparable commercial products, and the declining cost of high capacity storage media, lost data should be a crisis of the past, as it is easily preventable or recoverable.

WEBSITES:

<http://www.techsupportalert.com/best-free-backup-program>

<http://www.techsupportalert.com/best-free-drive-imaging-program.htm>

<http://www.techsupportalert.com/content/more-free-backup-software-recommendations-reviews.htm>

http://www.nticorp.com/en/us/product/shadow_5_windows.asp

<http://www.acronis.com/homecomputing>

http://www.ashampoo.com/en/usd/pin/0065/System_Uilities/Ashampoo-HDD-Control

http://en.wikipedia.org/wiki/Self-Monitoring,_Analysis,_and_Reporting_Technology

<http://www.seagate.com/www/en-us/support/downloads/seatools/>

<http://www.techsupportalert.com/best-free-hd-health-monitoring-and-diagnostic-programs.htm>



Color Scheme Designer: Free Online Color Wheel

by Verla Herschell

Digital Imaging SIG Leader, Topeka (Kansas) PC Users Club

The color wheel is a proven tool for those in the business of color and design, whether you are an interior designer, web designer, or artist. Well, I have come across a new “color wheel” for you, provided that you have computer and Internet access. It is part of an online program called “Color Scheme Designer” – <http://colorscheme designer.com/>. It is a free application, though donations are accepted if you like it.

When the program opens up, you will see a color wheel on the left and boxes of color on the right. There will be six small circle icons above the larger color wheel. These let you choose monotone color, complement, triad, tetrad, analogous, and analogous with an accent. On the color wheel is a small dark dot that you can grab with the cursor and move it around the wheel to choose the color you want. For the triad, tetrad, analogous and analogous accent options, you can also adjust the ghosted dots on the color wheel.

Under the color wheel are two other tabs: “adjust scheme” which can be used to adjust the saturation/brightness and contrast, and “color list” to see the actual colors used for the scheme. Under “adjust scheme,” there is a set of presets that can be used to further adjust the colors you might want to use. Just below the color wheel is an RGB: #####; when you click on that you can input your own number for your own color. You either have to know those color numbers, or you can use a program like Photoshop or Photoshop Elements to eyedrop a color and check the mixes, where the color number can be found.

On the right, below the color boxes, there are three tabs: “Preview,” “Light page example,” and “Dark page example”. When you click on either of the last two you will see a sample page using the colors you have chosen. In the lower right directly below the boxes in the Preview is a “Show sample text” button which will show what black, white and gray text looks like on the colors you have chosen.

At the top on the right are tabs for “Undo,” “Redo,” “Random,” “Colorblind,” “Color space,” “Export,” and “Help.” Under the “Color-blind” tab is a drop down of presets for what the chosen colors would look like to be readable by a person with different variations of colorblindness. The “Color space” tab drops down to let you see what your colors would look like as “Web colors” and “Pantone” colors; there is some slight color change when you select one. Under the “Export” tab is a drop down that will let you export to the different types of color palettes for the web / HTML and Photoshop, as well as a couple others. The ability to export your palette is great if you are creating a page or art in a program that “reads” the type of palette chosen.

Slide Scanning 2011

by Greg Skalka

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On the morning of October 22, 2007, my family, like many others in northern San Diego County, awoke to the threat of wildfires moving into urban areas. Though we were under mandatory evacuation orders, the need to leave was not urgent, so we were able to pack up our four cars over several hours. All the irreplaceable and important items we could fit were loaded, including photo albums, computer cases, external hard drives and my collection of 35 mm slides. We headed up to Orange County to stay for a few days, and fortunately had a house to return to.

Though our neighborhood was never really threatened, the experience left an impression on me. I've owned a digital camera for 11 years, and all of the 40,000 digital photos I had taken in that time were easily transported with us on a single external hard drive. Because I also kept a backup of these files in another geographic location, I was even less concerned about their safety. My collection of 7300 slides taken over 32 years was a big concern, however, since they occupied two large boxes and were the only copies I had.

Though I already owned three film scanners at the time, I had never gotten around to starting the scanning process, as I was still searching for that elusive perfect scanning method. I spent more time researching scanning options after the fires, bought a fourth scanner (a PrimeFilm 3600u film scanner) and outlined my new scanning plan in the film scanning presentation I gave to our group in 2008 (which can be viewed at www.uchug.org/Presentations/Slide%20Scanning.pdf).

Three years have passed since then, and I've only scanned a few slides. Unfortunately, I've found dealing with these thousands of slides is a daunting task. I'd found a scanner that provided good results, but with a scan time of 1 to 4 minutes each, I'd need to spend the equivalent of 3 to 12 work weeks (of 40 hours each) to complete the task. I could hire out the job, but even Costco's photo services would charge \$2100 to scan all my slides. Faced with a large cost in either time or money, I wound up doing nothing, and so my slides still sit in film form, vulnerable and degrading over time.

Fortunately my procrastination has managed to be beneficial, as there are now new film scanning devices available with much shorter scan times. One of these is the Wolverine Data F2D300 35mm film to digital converter (www.wolverinedata.com). It appears to contain the guts of a digital camera, so it captures the image quickly all at once, rather than in a slow scan. It does not even require a computer, storing the photo files in a small internal memory or a removable SD memory card.

The unit is powered from an AC adapter and cable. The cable has a small connector on one end (for the scanner) and a USB connector on the other. The scanner can be powered from AC by plugging the cable USB end into the power adapter, or the unit can be powered from any USB port by using only the cable.

Operation is simple, with only four buttons on the top of the unit. The control menus and the image to be scanned are displayed on a 2.4" LCD display on the front of the device. The scanner can be set to scan slides, negatives and black & white (negatives, I presume).

Two plastic scanning trays are provided. One tray holds up to four slides in their cardstock or plastic mounts; the other holds strip negatives (up to six 35 mm images). The trays have a hinged cover with magnetic latches to hold it closed. The slide tray is easy to load; the negative tray requires more effort to align the film's notches with pegs on the tray's base. A loaded tray is inserted into an opening on the right side on the scanner near the base and then protrudes out the other side.

The tray is shifted to allow each slide to be scanned. Detents in the tray help index the tray for each slide or negative, but you can also use the display to make sure the tray is lined up in the scanner correctly. It is best to place the slide or negative in the tray so that the image in the display has the correct orientation, but there is also a menu selection to flip or mirror the image before scanning.

The brightness of the image can be adjusted to some degree before scanning through an adjustment to the internal LED backlight. The brightness can be set to one of seven levels from -3 to +3 (+3 being the brightest, and 0 assumed to be nominal). By some degree, I mean that the "camera" inside the device also appears to have an automatic exposure feature that compensates for the brightness adjustment at times. This means that a change in the brightness setting does not always result in a visible change to the resulting image.

To scan, the OK/COPY button is pressed once; the scan takes only a couple of seconds. The unit then displays a save/edit menu. A second button press saves the captured image to either the internal 25 MB memory or a memory card in the external SD memory card slot. I have only tried a 2 GB SD card in the slot, though the product's box says it is also compatible with SDHC (though this is the only documentation that indicates SDHC capability). The save/edit menu also allows the image to be rotated 90 degrees in either direction (for portrait vs. landscape orientation), though it appears it only changes to portrait mode on the scanner's display. All of my saved images remained in landscape orientation.

The scanner claims a 7.3 megapixel image, which was confirmed by the 3312 x 2208 (nominal) image files I captured. The files are saved in JPEG format with fairly strong compression; the typical image file size is 1.4 to 1.8 MB. The scans I made were of good resolution, with no noticeable compression artifacts. The unit I tested appeared to crop the slide slightly, so the slide mount was not at all visible. I made scans of slides and color negatives and both came out well.

To copy the photo files to a computer, you can simply remove the SD card. The unit must be connected to a USB port on a computer (through the power/data cable) to copy any files stored in internal memory. The scanner can be set to provide a slide show of stored images on its LCD screen. The unit can also display on a TV with a display cable (which is not included), per the documentation.

Overall, I found the unit I tested worked well, providing a reasonable image very quickly. Even allowing an average of 10 seconds per slide to scan (to allow for tray loading), I could scan my entire slide collection in only 20 hours. This would give me a good quality copy of all my slides in a short period of time. I could then use my high-resolution PrimeFilm scanner on only the select few slides where a better quality scan might be needed in the future.

The only suggestions for changes or improvements to the Wolverine Data F2D300 I found are:

- Provide a JPEG compression adjustment, so that images can be saved at higher quality. The high JPEG compression is my main gripe about the unit.
- Provide a way to disable the automatic exposure feature, so the brightness adjustment works better.
- Provide a way to set the date and time in the JPEG file, so it can be set to reflect when the original photo was taken. The unit currently saves the JPEG files with a timestamp from an internal clock that starts from 1/1/2008 at 12:00 PM each time the device is powered on.

Overall, I found the Wolverine Data F2D300 to be a good value. While I'd prefer it saved images with a lower compression, or ideally with a lossless compression like PNG, its ability to scan so quickly makes it useful when there are a lot of slides or negatives to scan. It may not scan with the highest resolution, but it is definitely among the fastest.

Chapter 2 - When Two Is Not Better than One

The Wolverine Data F2D300 unit I used for this review was loaned to me by a member of my user group who won it at the 2011 Southwest Computer Conference (it was donated to the conference by Wolverine Data). After seeing how well it worked and how quickly it could scan slides, I purchased one for myself.

Unfortunately, my unit did not work quite as well as the borrowed one. Instead of cropping the slide image slightly, my scanner had a slightly wider view, so that the rounded inside corners of the slide mount are barely visible. This is not a problem in my estimation; I actually prefer this, so I can crop it myself later if desired. Unfortunately, the images captured are also slightly out of focus. The problem cannot be seen on the scanner display, but is apparent when viewing the images full-screen on a computer display. The files captured by the borrowed scanner are noticeably clearer by comparison.

I called the support number provided with the product (Irvine, CA area code) and was quickly connected to tech support. The person I spoke with confirmed that the focus problem could not be corrected by any adjustment, and that they would provide me with an RMA number to return it. Since I purchased it from Costco (online), I elected to save the return postage that I presumed I would need to pay, and instead returned it to Costco (at a store). I then ordered another F2D300 scanner.

My second slide scanner was a keeper. The image was slightly clearer than even the borrowed scanner. Like the borrowed scanner, the image was slightly cropped, but this new one also had the image shifted down slightly. I am dismayed that this product does not appear

to be very consistent between units in image quality, but at least I got one that I am happy with on the second try. I'm not interested in rolling the dice again. Now I can get my slides digitized before the fire season this fall.

From the July 2011 issue of DriveLight.

This and That

by Elizabeth B. Wright

Computer Club of Oklahoma City, OK

Remember the play *Six Degrees of Separation*? It was also a movie. The title has become a common catch-phrase, but it doesn't really get the respect it is due. The theory is that all of us are connected to everyone in the world by only six steps. I know Pete, Pete knows Pierre, Pierre knows a high powered British politician, the HPBP knows a member of the British Royal Family, the Royal is related to and knows the English Monarch. So following this line, there are only four people separating me from knowing British Monarch. Of course my chances of meeting her are non-existent, but that isn't the point. The lesson here is that so much of what we do is influenced by this factor. Pyramid schemes are doomed to failure because of it. Ideas are lost because of it. Tell one person about your fantastic theory for curing some horrible disease and the next thing you know it has been patented by someone you never heard of. This is also why you keep getting the same junk email from so many different people.

So how can we apply this to our computers? If you are like most of us, we use our computers for the more simple tasks of word processing, connecting to the internet, some bookkeeping (banking software, etc.), graphics – mostly photographs, and other simplified work. But we all run into trouble now and again. A big “for instance.” I booted up my computer this morning to work on this article. And for the first time in my 20 some years of owning a computer it failed to boot the hard drives properly. I could not access much of my data. Nothing to do but shut it down, fortunately it went through the proper procedure for that, and turn it back on. It came back in its normal configuration. Go figure. Hopefully this will never happen again, but only time will tell.

Back to the subject at hand. There are 6° separating us from useful computer skills:

1. Computer hardware
2. Operating system
3. Computer skills
4. Purchasing software
5. Software training
6. Computer competence

#1, Whether you bought a computer completely assembled or built it yourself, the first step requires knowing what is inside the case. You don't necessarily have to completely understand how it all works, but you should at least be familiar with the names of the parts in order to use some of the helpful information found in the manuals and other books as well as on the internet.

Second step, and possibly the most frustrating, is getting to know the operating system.

This is the software that is like the fuel that runs the engine of your car. Without it, you ain't goin' no place. In the early years of computers there were no operating systems (often referred to as OS.) And only those people who really, really wanted to learn about computers mastered the necessary skills to do so. Now the two main choices to get us over that hurdle are Microsoft Windows machines and Apple Macs. Both require an OS to make them do our bidding. The more you learn about the OS the easier other tasks will become. Computer clubs and community colleges are places to look for help in this area.

For item #3, learning basic computer skills gets you started, honing those skills keeps you moving forward. This step is somewhat a combination of learning about the OS and learning to use software as in step #5. Some kind of training is usually necessary and can be gotten from the previously mentioned clubs and classes, but also from a *really* patient friend or relative who will spend endless hours helping you learn this most foreign of foreign languages. Of course you can always slog your way through it on your own, but what fun is that?

#4, Purchasing software depends on what you want the computer to do for you. Most home/small office users buy programs for personal finances, word processing, spreadsheets and graphics. People who need to make the computer pay for itself and also support them buy, in addition to those, the more sophisticated software for databases and intense graphical work. And there are also "Gamers," but they are different from most of us.

#5, Software Training is a bit less daunting than computer skill training in that much of it consists of following certain steps to accomplish a given task. But of course, it isn't really easy. You must be willing to set aside preconceived notions of how things ought to work and live with how the programmers mandated them to work. But there are classes, books, online training, computer clubs and friends to help out in this step too.

The final step, Computer Competence, is the goal line in our 6^o hypothesis. There are four steps between your purchase of the hardware and competence/confidence in using it. If you don't get the cart before the horse in those four steps you will be much happier in your computer world.

From the July 2011 issue of the Computer Club of Oklahoma City eMonitor.

Society News

Jan Rothfuss, wife of our VP Dan, volunteered to e-mail members who were behind on renewing their membership. So far it has proven to be a huge success. Thanks Jan. Check the front cover to see when your membership expires.

Our annual picnic was a success. The food was excellent. We proved you don't need a computer to have a good time. To everyone who helped thanks. A special thank you to our cook, Al Saia. His humor is always welcome. The silent auction helped us put some cash in our treasury.

Hope to see you all at our Sept. meeting.