

Tech Tips

Over the years I've used a computer a great deal and in my work as general secretary of the Congregation I rely on it for many tasks. This little document is a way of sharing a few things I have learned. I hope you find it helpful.

Backing up

Hard disk drives are mechanical devices that may eventually fail. Worse, computers and all their data may be stolen or destroyed. Backing up data is very important but many find it a nuisance.

In the past, one used diskettes, tape drives or Zip drives, for backups. Today the simplest thing is to use an external hard drive. They are reasonably priced and can be quite portable. I have a 60 megabyte drive sitting on my desk that fits in a shirt pocket and it came with excellent software. It runs automatically every day and you can also do a manual backup with the press of a button on the drive. It requires no power supply, but uses only the power provided by the USB connection.

If you don't have a lot of files to back up, you could use a USB storage device, sometimes called a "thumb drive." These are available in sizes up to 4 GB now, probably more than adequate for storing essential files.

Windows has its own backup utility built in, but it is less convenient to use than commercially available programs. Click Accessories → System Tools → Backup from the program menu. I use a program called Retrospect, that came bundled with the external hard drive, but there are a number of other programs that are quite good.

Another possibility is backing up your data to an Internet site. With Mozy (www.mozy.com) you can store up to 2 gigabytes on their site free. This is convenient because you can access this data anywhere with your username and password. For a fee you can get more storage space, but 2 GB is probably enough for storing essential data files. The program runs automatically in the background and, while slow, it does not use many system resources.

Defragmenting the hard drive

Not long ago some friends complained about how slow their old computer was. "Not enough memory," they said. It took forever to boot up.

Granted, it was an older computer with relatively little onboard memory (RAM) but it should not have been running so slowly. I decided to take a look and then defragmented the hard drive. As I thought, this had not been done in years. Defragmenting the drive helped, but eventually I had to restore the hard drive to its factory settings, meaning that anything installed after purchase had to be erased. Had they defragmented the drive regularly this would not have happened.

When a file is written to the drive, it does not get stored in the same place, as though on the track of a tape or phonograph record. It is, rather, stored in chunks in various locations on the platter of the drive. If the drive is in good condition, properly defragmented, these chunks are close to one another and the file is retrieved quickly. The more the information is spread over the drive, the longer it takes the drive to retrieve it, since the drive is mechanical and it has to search to find the parts of the file. (The hard disk drive is rather like a phonograph, only the arm floats just above the surface of the magnetic disk.) Defragmenting moves the pieces closer together so the drive does not have to search for them.

Windows has its own *defragmentation utility* that can be found under Accessories → System Tools. A more powerful utility is Executive Software Diskeeper (www.diskeeper.com). This company makes the “light” version of the defragmenter that Windows uses. There are other disk utilities out there, but this is one of the best.

Cleaning house

Even after defragmenting a drive, performance can be sluggish. This could be due to the number of programs that have been installed on the computer.

When installing new software, you often will find that the installation program wants to install little programs that run in the background and that load automatically when you start your computer. Sometimes you will see the icons for these programs in the system tray (at the lower right of your screen). Each of these take a bit of time to load and also consume some system resources just idling in the background. Many of these programs are only for convenience: they automatically check for updates and open full programs more quickly, for example.

(Note: The following comments apply to the Windows XP operating system. They might apply to earlier systems, but I can’t guarantee that.)

You can see what’s running by pressing the Ctrl-Alt-Del keys at the same time. When the window opens (it’s called Windows Task Manager) you can click on the “Processes” tab to see what’s running and what resources these programs are using. You might be surprised to see that you have a lot of “processes” running and that they are using a lot of your memory.

Some of these programs are essential, but others can safely be removed from the startup list, that is the list of programs that Windows starts when it boots up. From the Start menu, select Run and then type “msconfig” in the box and then OK. You’re now in the “System Configuration Utility” and you can make changes to the services you want to run automatically and to the programs you want to load when the computer starts. Be careful in making changes; you don’t want to remove or disable essential items. You’ll see, however, that some of the programs/services are merely there for convenience, enabling programs to start more quickly or automatically checking for updates on the Internet.

Be reluctant to allow others to install software on your computer or to give you software to install. The same friends who complained of their slow computer had permitted other friends to install some programs, at least one of which was causing the computer to crash on occasion. Also, you could be installing a virus or other form of “malware” along with the program.

Protecting your computer from attack

A recent article estimated that about 10 per cent of the computers in the world are infected by some form of “malware,” that is, programs that have found their way into computers and that can damage both the host computer and the computers of others in various ways. Sometimes hackers can actually gain control of a computer and use it to do things like send e-mails or even collect personal information.

The major defenses against these attacks are *antivirus programs*, which check software for viruses and other forms of malware, and *firewalls*, which prevent computers from being accessed by those nasty hackers out in cyberspace.

I have found two *free* antivirus programs that work quite well. I’ve been using one called Avast! Antivirus, available from www.avast.com. Another program that I have used on one of our computers here is AVG Antivirus, available from www.grisoft.com. Both of these programs have received favorable reviews in leading computer magazines. Both companies also have programs that you must pay for. These have more features, but the basic free programs seem to work well.

When you are connected online, there is a chance that a hacker can access your computer. Windows XP has its own *firewall* to guard against this and it should be turned on. (Click on “Control Panel” and then on “Security Center” to check on the status of your firewall and antivirus programs.) You might also consider installing Zone Alarm, from www.zonelabs.com. There is a free version of this firewall as well as paid versions. Zone Alarm allows you to choose which programs or services can connect with your computer. It also allows you to lock your computer, providing any access to the Internet. (The free program may not be available for Windows operating systems prior to XP.)

Finally, you may wish to use an *anti-spyware program*. There are many of these on the market, but an old standby that has a free version is Ad-Aware (www.lavasoft.com). Programs like this remove potentially harmful “cookies” and other more harmful stuff that can get installed when you connect to the Internet.

Free Office suite?

Bill Gates may be a very generous man, but Microsoft is not giving away its MS Office products. Office is not cheap, even for an upgrade. At the same time it is nearly indispensable since it has become more or less a world standard.

There is an office suite that does most of the things Microsoft Office does and it's actually free to download. It's called Open Office and is available at www.openoffice.org. I've used it and have found that it is quite powerful and even better in some areas than Word or Excel. You can save your documents in the Open Office format or in Word or Excel format. The suite also comes with a presentation program like PowerPoint. Open Office does not have all of the features of the Microsoft product, but let's face it – most of us use only a fraction of the features that MS Office contains. It is available in many language versions.

Portable documents: the PDF file

You may have noticed that most of the documents being uploaded to the CPPS international website have been converted to what is often referred to as portable document format of "PDF." This format, developed by Adobe, is a way of "coding" documents so that they are "device independent." In simple terms, it means that a PDF file can be read by any computer that can run the free Adobe Acrobat program, available at www.adobe.com.

For example, if you have a document written in Word Perfect, it might not be readable using Microsoft Word. If you have an old version of Word, you might even have problems reading files written by new versions of the software.

You have a bigger problem when you don't have a copy of the software used to create a document. The original files used to print the recent *CPPS Heritage* books, for example, were created using a program called Quark. You could not read that original file without having Quark installed on your computer, but once the file is converted to Acrobat format it is accessible to anyone with Acrobat Reader

PDF files make it easy to share documents created with a variety of programs on both Windows and Apple computers. There are even versions of Acrobat for operating systems like Windows Mobile, Palm, Linux, and Solaris.

There are a variety of PDF creation programs out there that are either free or very cheap. They don't have the features of the full programs, but are adequate for creating the occasional file. For example, Open Office has a PDF creation tool in its word processing program.

With the full version of Adobe Acrobat or an equivalent program (like ScanSoft PDF Create!), you can protect the document with a password that is needed to open it, print it, or edit it, for example. This adds a measure of security to these documents. Another feature of PDF files is that you can use them for proofreading, making comments and corrections in the margin, again using the full program or an equivalent program.

In these days of rapid change, another advantage of the PDF format is that it is likely to be around for awhile. There are documents stored in formats that are not accessible now since the software programs in which they are written no longer are available. A number of people believe that the PDF format will survive for the foreseeable future.

Software online

A general note on finding software programs: There are often very good programs available for download available on the Internet, programs that work as well as those you buy in boxes in a store but which are either free or “shareware,” meaning that you can try them and then pay for them if you find them worthwhile. Two reliable sites are www.zdnet.com and www.tucows.com. There are other sites, but these are two that I have used many times. They are arranged in a helpful way and many items have ratings as well.

I hope you find the above hints helpful. Feel free to contact me with questions or suggestions.

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January 2007
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