

Tips for Buying the Right Computer*

By Mary Lynn Wagner and Rich Wills

With continuous changes in technology, it's important to understand new technology terms and features before purchasing a computer. Below are some of the basic items you will need to bear in mind before purchasing your next computer.

How Will You Use the Computer?

The first thing to consider when buying a new computer is how you are planning to use it.

- Will you use your computer mainly for word processing and Internet searching?
- Will you be working with high-end graphics?
- Will you be using or creating CDs or DVDs on your computer?

The answers to these questions will start you on your way to determining the type of computer to purchase and minimum requirements that will be the most important for you.

Deciding on an Operating System

If you are not sure whether you want to buy a PC or a Mac, this is the first thing you will want to investigate. Traditionally, the Mac is known for its graphics capability, speed and superior software for desktop publishing and Web page design. Its major disadvantage has been its incompatibility with the PC. However, all of this is changing. Today, a great deal of software and hardware are compatible with the Mac and the PC. Files can now be traded between the operating systems using USB Flash Drives and the Mac can even be configured to "dual boot" to a Windows operating system such as Windows XP, giving you essentially two computers in one.

If your main focus will be on sharing information with people in the business world, you may want to purchase a PC so that compatibility is not an issue. There are quite a few software programs that provide excellent graphic capabilities in the event you want the ability to create superior graphics.

How Much to Spend

The rule of thumb is to buy as much computer as you can afford. Computer hardware prices have decreased dramatically. A nicely equipped computer can be purchased for \$700 to \$900 depending on your needs. You don't have to buy the biggest or the most powerful computer on the market. Look for a package deal that includes a nice monitor, plenty of memory, a decent size hard drive, and a keyboard/mouse. If you don't find a great package deal, you are better off spending more money on the computer itself and purchasing software and a new printer later on.

Buyer's Checklist

In order to increase the lifespan of your computer, buy above the minimum specs listed below. If longevity is a priority (and if you can afford it), get something closer to, but below, the current top of the line. If you cannot afford to buy everything above the minimum specs, concentrate on the processor speed, the memory and the hard drive capacity. These three components will optimize the performance of your computer.

Processor Type and Speed:

There are several classes of processors available with the latest and greatest being the Intel 7i processor. The most common processor is the dual core chip. This processor essentially gives you the processing capability of two separate processors within one chip. We could get caught up in the bits and bytes of it all, but suffice it to say that the

higher the number, the more powerful the processor.

Memory or RAM

Sometimes called SRAM (**S**ynchronous **D**ynamic **R**andom **A**ccess **M**emory) or DRAM, 1Gb of memory is minimum for modern operating systems and 2Gb is normal. Memory is a commodity and memory is cheap these days. If you can upgrade to 4 Gb for \$100, that's money well spent.

Hard Drive

The hard drive is where files are stored as well as where the computer's operating system is installed (you might know it as your C:\ drive). Bigger drives will store more data. If you download music or store a great deal of digital pictures on your computer 80 Gb of storage would be a minimum with many computers having 160Gb. Music storage can eat up a great deal of space quickly so a larger drive would be a good choice.

Hard drives also come in several "spindle" speeds (the rate at which the metal disk spins inside the hard drive). Faster spindle speeds allow faster reading of files to and from your hard drive. Thus, a 7200 RPM hard drive will perform better than a 5400 RPM drive. The cost difference isn't huge between the two so choose the faster drive. There have also been dramatic improvements in hard drive technology in recent years. Whereas IDE drives were the standard in the past, SATA has now replace the older technology. SATA offers much higher capacity with faster spindle speeds at an inexpensive price point. The latest and greatest technology has leveraged the increased capacity of solid state drives providing faster transfer rates and no moving parts. These drives are reliable and fast with no moving parts to break. However, they are more expensive and have smaller storage space. Again, this will be a cost/benefit decision on your part.

Operating System

For the home and small business user, Windows Vista Home Edition will suffice. If you are planning to connect this computer to a network, seek out a computer loaded with the Professional Edition which supports the networking functionality. Windows Vista is quickly becoming the Windows ME of our decade and will soon to be replaced by Windows 7 at the end of October. Do yourself a favor and purchase a computer that includes a Windows 7 upgrade.

Virus Scanning Software

This software is a requirement if you are going to have email or internet access. While nearly all new computers come with a 90-day trial, do yourself the favor of purchasing the annual subscription and spend time learning how to update the software weekly. As a new virus is discovered these software vendors write updates that allow your system to detect them. It's essential that you invest some time to make sure you are doing regular, automatic updates. And when your subscription expires, renew it right away. Don't forget and don't cheap out in this arena. You'll pay now or pay later, and it's *always* more expensive later.

Surge Protector

Quality surge protectors (or power strips as they are sometimes called) are another essential item. If lightning strikes your house and damages your computer the warrantee is usually void. Quality manufacturers (such as APC) will pay you for damaged electronic equipment if you are connected to one of their surge protectors. Plan on spending between \$25 and \$45 for a good one. Some even have the ability to protect your phone and/or cable lines as well. This is another essential item.

Extended Warrantee

Consider purchasing a three year warranty that includes at-home service. If you have to take your computer to a

repair shop or call someone to fix your computer you will spend a minimum of \$150 plus parts. These warranties cover parts and labor and are a smart purchase.

Drives

A CD-RW drive is commonly known as a CD Burner and gives you the ability to copy files, music, pictures, etc., to a blank CD. Read-and-write speed follows the same concept as hard drives: the faster it spins, the faster it works.

A DVD-ROM allows you to enjoy a DVD video on your PC. It will also prepare you for future software and large data files that will be released on DVD-ROM. A DVD-ROM drive can also read CD-ROM discs, allowing you to play your favorite Audio CDs or install new software applications on CD-ROM media. A DVD+RW/CD burner allows you to burn DVDs, CDs, watch DVD movies, and read data from DVDs or CDs. DVD discs hold up to 4.7Gb of data — about seven times the capacity of a standard CD.

Monitor, Keyboard, Mouse, Etc.

Other items such as monitors, external speakers and other software are a matter of preference. Keep in mind that your current monitor, keyboard and mouse will work universally with any computer so you may be able to save money by reusing what you have.

Resources for Checking Out Computers

For PC's, we recommend considering Dell and HP first due to the quality of their product, price point, ability to customize the computer configuration and availability of technical support. Consider their "Business" lines as the computers tend to come with less software that you won't use, have more robust warranties and components that are more highly tested. Gateway Computers are another good choice (See box at left for additional resources).

Wagner serves as the director of information resources at Keating Muething & Klekamp. She is responsible for managing all aspects of the firm's Information Resource Center. In addition, Wagner is an adjunct legal research professor at the Salmon P. Chase College of Law. She has published numerous articles and frequently lectures on Internet legal research. Wills serves as Chief Information Officer at Keating Muething & Klekamp. His responsibilities also include the development and oversight of technology related policies and procedures, formulation of strategic planning and implementation of technology initiatives as well as the budgeting and approval of technology related expenditures.

**Reprinted with permission from Cincinnati Bar Association. Originally published in the Cincinnati Bar Association Report, November 2009.*

<CALLOUT>

Resources On Computer Terms, Shopping

Tech Terms Computer Dictionary

www.techterms.com

Provides easy to use interface and is divided by subjects such as Internet, hardware and software tech terms.

The Sharpened.net Computer Glossary and Internet Glossary

www.sharpened.net/glossary/index.php

Provides a list of computer terms with easy to understand definitions.

Computer Web Sites:

If you want to shop and compare online, listed below are the recommended sites. It's also a good idea to check online because there are often special deals through the manufacturer that are not available in stores.

Dell www.dell.com

Hewlett Packard www.hp.com

Gateway www.gateway.com

Apple (Mac) www.apple.com.

Additional resources to check out before purchasing a computer

PC World

www.pcworld.com

Maintains "How to" guides for purchasing laptops, desktops, netbooks, etc... It also contains reviews on desktops, notebook computers, printers, PDA's, and monitors.

CNet

<http://reviews.cnet.com>

CNet is another great site for obtaining reviews on laptops, desktops, cell phones, cameras, etc... It contains buyer's guides and many resources to help you locate the best computer for your needs.

Personal Computer Buyer's Guide

<http://compreviews.about.com/od/buyers/u/BuyersGuide.htm>

Maintains a collection of articles to help consumers shopping for a new laptop, desktop or monitor. These articles will help in determining just exactly what you need so you don't end up with something too slow or with too many features.

Computer Shopper

<http://tinyurl.com/leglna>

In addition to buyer's guides and reviews, this site also includes an easy to use 2009 Student Buying Guide for desktops.