

Deciding on a New Computer (1/5/2015)

It is an obvious fact that computers get old and they do eventually fail. It seems as they get older, no matter how well you maintain them, their performance seems to slip. In any event, many of you will be in the market for a new computer during the next year. This handout is to help you understand the advertising that you see and to perhaps aid you in making an intelligent choice.

A couple of things should be considered first. What is your approximate budget?; Do you want a desktop or a laptop?; What are you going to use it for?

First the budget: Computers seem to get cheaper (sorry, less expensive) with every passing month. Today you can get a very good new machine for somewhere in the neighborhood of \$500. That's the average. If you are going to spend much more than, say \$650, you should get some really extra features. A real low end unit can be had for under \$300. I'll discuss below.

Let's address the desktop or laptop idea next. They each have their advantages (and disadvantages). This decision should be independent of use (unless you need portability) and budget.

Laptops are compact, portable, self contained and ideal for folks who want to move them around the house (or to use them while traveling). They are somewhat limited in screen size (max 17"). They don't have unsightly wires. New ones will always have built in Wireless Internet capability and usually have a built-in camera. Extra expenses associated with a Laptop might be to buy an external mouse and a carrying case. If you buy a Laptop, you also might want to invest in a wireless router to set up WiFi in your house.

Desktops probably provide a little more power for your money and allow you to replace or upgrade certain components (such as a screen). If you want a very large screen (e.g. 23") a desktop is the way to go. But, they are stationary and have lots of wires. New ones usually have wireless capability.

What are you using it for? If you want to do email and Internet searches, you don't need anything extra special. If you do lots of online games with complex graphics you might require more computing power. See specifications below to help make your decision.

Computer Ads

Computer ads are full of abbreviations and what seems like code words. Here are some guidelines to assist you. All advertising will state the hard drive size (in Giga-bytes or GB - a GB is 1000 Megabytes), the amount of memory or RAM (also in GB) and the type or brand and often the speed of the chip (processor). They will also describe some or all of the other items below.

- Size of Hard Drive

Laptops will have 250 to 1000 GB, depending on the price.

Desktops will have 500 to 2000 GB (1000 GB = 1 TB) or even more, again depending on the price.

If you are buying a new machine to replace a 5-year-old computer, chances are you currently have less than 200 GB. Getting a huge drive is most important if you save a LOT of pictures and iTunes songs. Paying extra for the largest available hard drive may be a little overkill. Hard drives come in two basic rotation speeds - 5400 RPM and 7200 RPM. The faster makes for quicker access. If it doesn't say anything, it's likely 5400 RPM. A very few computers have solid-state drives that don't rotate.

- Memory or RAM (Random Access Memory) - sometimes described as DDR (Double Data Rate) RAM.

Laptops will have 2 GB to, maybe, 8GB of RAM. Windows 7 and Windows 8 doesn't "eat up" the RAM the way Vista does, so 2 or 3 GB is really enough.

Desktops will start at 4 GB but may go up to 10GB or even 12 GB. The more RAM you have the better your machine will perform. Don't be attracted to super inexpensive machines that have only 1 GB. This is probably the single most important spec in any computer.

- Chip (Processor) Brand - Intel (Pentium 4, Centrino, Core 2 Duo Processor, i3, i5 and i7), AMD (Sepron, Turion II Dual-Core) etc.

Lots of buzz words here. To most folks it makes very little difference. Speed is sometimes quoted. If it is, it is described in MHz or GHz. New Desktops can be over 3000 MHz (3.0 GHz). Laptops average closer to 2.0 GHz. 64 bit processor needed to be totally Windows 7 or 8 capable. If chip is very high-speed, ad will probably brag about it. If your current machine is slower than 800 MHz, call Smithsonian and go buy a new machine.

- Operating System

If buying a Windows Machine, the current system will be Windows 8. Although Windows 8 was designed with a touch screen in mind, many or even most machines sold with Windows 8 will NOT have touch capability. It still works fine with a mouse. There are a great number of differences between Windows 8 and ANY previous version. It will be somewhat traumatic to jump right into the new system. My suggestion is when you buy a new machine with Windows 8, get on the Internet and type "Windows 8 Tutorial Video" into Google. It will give you many video lessons that will be helpful in getting used to your new environment. Windows 7 machines are still available online (e.g. www.dell.com and www.toshiba.com) and in a very few stores (e.g. Costco). There is a free download called "Classic Shell" that puts the old-fashioned start button back in Win 8. It's a good idea.

- CD/DVD Reader/ Writer - All units except the small or extra thin laptops will have this.

Description may include a number like 8x. This is reference to the speed at which it burns disks. An 8x drive will burn a CD eight times as fast as it takes to play it - an audio disk that plays 48 minutes will burn in 6.

- Wireless Capability - Laptops will always have 802.11 b/g/n wireless built in. Even most desktops today have this built in. If you have a wireless router in your home, this permits putting the computer anywhere within range of the router's signal.

- USB slots

Two USB slots in cheaper model Laptops, 4 in expensive ones.
Desktops typically have 4 to 6 slots in back and maybe two more in the front.

- Camera Card Slots (for digital camera cards)

Many new machines will have a slot that lets you take the memory card out of your camera and put it into the machine directly.

- Webcam built in

Most Laptops have a built-in webcam and a built-in microphone. If unit doesn't have camera included, a clip-on camera can be purchased for as little as \$25.

Desktops seldom include cameras (the exception is the all-in-one). Most add-on cameras include a microphone.

- Battery

Laptops will often brag about battery life. All will have Lithium-Ion batteries. Life of battery depends on the number of cells. I speculate that battery-life claims are a little (maybe even greatly) overstated. Most will last over two hours. When it says "up to" 4 hours of life, you know that's under super ideal conditions. Extra batteries are expensive. Even under normal usage a laptop battery usually doesn't last more than five years.

- Computer Brand

This represents MY opinion: There are a lot of brands on the market. I personally have not had good experiences with an eMachine or a Gateway. They seem to have more than their share of failures. With Desktops, HP and Dell populate the middle of the pack. Compaq, manufactured by Hewlett Packard, tends to be a little less expensive. Sony (marketed under the name VAIO) tends to be a little more pricey.

With Laptops, I've had good luck with Toshiba, Sony, HP and Dell. Lesser-known brands such as Lenovo (IBM affiliate), Acer, Asus and Fujitsu are available. I would pay more attention to the features than the brand.

- Software

Some new Windows computers will come with Microsoft Works. This is NOT Office and does not include Word and Excel. Works, however, can be made to open Word and Excel Documents. Also, most new machines come with a trial version of virus checkers too. Don't let the salesperson talk to into buying something extra. Good virus and spyware checkers can be downloaded for no charge from the Internet after purchase. A free Starter Edition of Office - Word & Excel with fewer features - is available online but doesn't work with Win 8.

Afterthought - I personally don't believe in buying the extended warranty on a new machine. It's expensive and you know the companies make money on them. Most electronic failures happen early in a unit's life - which would be covered under the regular warranty. A later failure might be better handled by replacing the machine.

By the way, damage done by viruses is never covered by regular or extended warranties.

Also, to avoid bait and switch, it might be a good idea to have a good set of requirements in mind when you go shopping. There are a lot of slick salespeople out there who will try to tell you that you need more than you had in mind. Sometimes I think they target people in our generation.

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