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## Purchasing a Computer — Investing in Your Career

### The most important question to ask is what you intend to use the computer for?

The answers will determine the features and cost of the computer. Word Processing, surfing the web, checking e-mail and creating simple graphics do not require an advanced computer. If you are publishing a large book, working with high resolution graphics and video, or playing the latest 3-D video games, you should buy the most powerful computer you can afford.

As you determine what you need, it is important not to buy a lot more than you will use up. Because of the rapid developments in technology, the value of your computer drops dramatically in a short period of time. It may be more economical to replace your current computer sooner rather than to buy more than you will use in the next year or two.

Computers need to be used. They will have very little value in four or five years. If you purchase a \$1600 computer this year and use it for four years, it will cost you \$400 a year. If you purchase an \$800 computer and budget it for two \$400 years you could then consider purchasing a new computer in two years --when a new \$800 computer might have features not even available for the \$1600 computer of today.

If you are new to computers and unsure of what you will actually use it for, you might consider an inexpensive used computer to get your feet wet. Once you know what you want, you can make a more informed choice. It is important to buy a computer no more than a couple of years old that runs 98, ME or XP. Older computers are more difficult to use and will only frustrate a new user. Sometimes you can get a good deal from a colleague.

When budgeting for computers, remember that you will also need to buy software. These are the programs that make your computer useful for specific tasks. As an educator, you qualify for substantial discounts on many software products. Check with an education dealer before purchasing at regular prices. Two companies I have dealt with are [www.EducationalResources.com](http://www.EducationalResources.com) and [warehouse.com](http://warehouse.com) (click on education), but others also serve the education market. Some software purchased by the district for your work computer is allowed to be copied to your home computer. This includes the version of Microsoft Office on your work computer. Note: this only applies to a computer assigned to you, not for software on lab computers.

### Should I buy today or wait for the next model or price cut?

Home computers are an investment in yourself, your career and your family. You should buy a computer because it will allow you to do things you could not do otherwise. If you wait, you lose the value of that computer in meeting your current needs. As a professional, your time has value. If a \$400 a year computer can save you time and/or improve your output, is it worth it?

Although large discounts on hardware are no longer offered to

educators, you can sometimes save a few dollars by ordering from the educational division of the larger manufacturers. If you will be using your computer for educational purposes, you also qualify for a state sales tax exemption. Be sure to bring a copy of the exemption form with you when you buy your computer. The Union web site ([www.chtu.org/BuyComp.html](http://www.chtu.org/BuyComp.html)) has more information.

### What features should I look for?

**Processor Speed** - this is the brain of the computer and is commonly reported as running at so many GHz (gigahertz). This is a way of roughly comparing the speed of the computer. Many computers today are 2 gigahertz or higher. Processor design also affects the computer's speed, a Pentium is faster than a Celeron of the same Ghz. Based on compatibility issues we have experienced, I would recommend purchasing a slower Pentium over a faster Celeron at the same price.

**Internet Connection** - Modems allow you to create a dial-up Internet connection using your phone line. A faster DSL or Cable connection needs ethernet capabilities on your computer. Ethernet is also used to create a home network connecting multiple computer together to share a printer or Internet service. Be wary of the rebates offered for purchasing an Internet service for 3 years. With the proliferation of high speed Internet access, you may not want to be stuck with a dial-up connection for 3 years. If you live within a local call of the school district you also have a free account you can use on the school district network.

**Monitor** - The display will often out last your computer. A 17" multi-sync non-interlaced monitor is considered standard. Newer flat panel displays have come down in price and are worth considering - especially if space or esthetics are an issue. Always try out the monitor to make sure you are happy with its image quality. You will be staring at it for many hours to come.

**Graphics/Sound Cards** - speed and compatibility are important for games or multi-media creation. You will also need a set of speakers to hear quality sound output from your computer.

**Inputs** - USB is commonly used to connect printers and scanners. Newer computers have USB 2, instead of USB. This is a faster connection that is compatible with older USB products. Digital video cameras and faster peripherals may use an input referred to as either Firewire, i.Link or IEEE 1394. Having some input connectors on the front of your computer saves having to get in back to add or remove a connection. The ability to edit video and audio on a computer is transforming the multi-media field, the way graphic design software transformed the graphic arts field in the previous decade. These capabilities are now practical to improve your presentations or family movies.

**RAM (Random Access Memory)** is used while the computer is running. This memory is cleared when the computer is turned off. Multi-media intensive programs need plenty of RAM to load the graphics and sounds before they can be viewed. Every program

that is run at the same time requires additional RAM. The minimum you should get on a new computer today is 128MB (megabytes). An additional 128MB (total 256MB) *or more* is a worthwhile investment.

**Hard Drive** - stores programs and information until they are used. A new computer today has at least a 20 - 40 gigabyte hard drive. If you will be doing a lot with video or audio (or installing a lot of games), you should get a larger hard drive and be sure there is space to add a second drive in the future.

**CD/DVD Drives** - Every computer includes a CD-ROM drive. Many computers have a combination CD/DVD drive that can play/read both CDs (audio & data) and DVDs (videos & data). Some computers also include a second CD-RW (Read-Write) drive which allows you to make ("burn") your own CDs. Creating a CD is an important means of backing up or transferring your work to another location. Floppies are no longer practical to store the larger files created by new applications. DVD-RAM drives, that allow you to burn your own DVDs, may begin to replace CD burners as prices drop and compatibility is improved.

**Backup System** - CD-ROM (or DVD) burners are so inexpensive you should consider having one on one of your computers at home. Backing up (making a copy) of your work is extremely important - electronics do fail from time to time.

**Printer** - High quality color/black ink jet printers are available for \$100 to \$200. For typical home use, they are more than adequate. The more expensive ones generally print faster and make color prints that rival photographs. The paper and ink used to print photos can be expensive - you will probably spend more on supplies than you paid for the printer. B&W Laser printers have come down in price, and might be worth considering if you plan to do a lot of black and white printing.

**Portability** - A popular computer type is the laptop. These self-contained, battery operated computers can be used almost anywhere. Their main drawbacks are their increased cost and the limitations of compact size. If you don't like to use the trackpad, you can easily connect an external mouse -- or even a full size keyboard. Because they are moved around, they also tend to need more repairs.

**Warranty** - Compare length of warranty and whether repair work will be done in your home or you must take or mail the item to a specific location. Most hardware problems occur in the early in the life of a computer or after many hours of use. Salespersons are often under pressure to sell you extended warranties because of the high profit margin for the store. Depending on your abilities and the quality of the original warranty, an extended warranty could still be of value.

Talk to colleagues that already are using a computer, read up on the latest systems in the computer magazines or on the Internet.

**What about a Macintosh?** If it meets your needs, the Macintosh is still worth considering. You can transfer most files between the Macintosh and Windows world. I use both the Macintosh and Windows 2000/XP regularly and both have advantages and disadvantages. The Windows XP operating system on most new computers is much more stable than Windows 98 and is comparable to Macintosh OS X.

*Updated from previous articles in the Union Technologist.*

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## **Moving files from your old computer to your new one (or between home and work)**

Which method you use will depend on the built in devices and outputs on your old computer and the transfer mediums you have available. Check with the Media or Technology Specialist at your school. Sometimes you can borrow an external hard drive or zip drive for a short period of time.

1. Copy files via a network connection. Most computers purchased within the last couple years have an ethernet card built in. You can use the personal file sharing to share your hard drive over the network and then copy files at high speed. You can buy a reverse cable to connect two computers directly to each other or a hub/switch that allows you to connect multiple computers, printers and an Internet connection together. For more about home networking check the October 2000 Union Technologist on the chtu.org website. Although prices have dropped considerably, the concepts in the article are still valid. Wireless networking is relatively inexpensive now and easier than running network wires throughout your home.

2. Use an external Zip drive to copy the files. You can also use it to back up files or take them to school. Zip drives store considerably more information on one disk than a floppy can hold.

3. Use an external hard drive to copy the files. You can also use it to back up files or take them to school. Some external hard drives also function as MP3 music players.

You are best off reinstalling any programs from the original or updated installers. But make sure you have any serial # or registration # that may be needed. When transferring files don't forget your e-mail, program settings and personal files that may not be stored in the My Documents folder. Windows XP has a **Files and Settings Transfer Wizard** that can help with the transfer of files and program configurations. Click Start > All Programs > Accessories > System Tools > Files and Settings Transfer Wizard.

## **More ideas for transferring work between home and school.**

1. E-mail it back and forth to yourself as an attachment. Your school (staff.chuh.org) account currently does not have a file size limit. Using your web e-mail account (email.chuh.org) you can also attach files to a Note that is stored in a separate folder from your e-mail (Create a **New Note** rather than **Message**.) You can access it anywhere there is Internet access. Larger files may take a while to attach while they are uploaded to the district e-mail server and checked for viruses. Your staff.chuh.org account does not allow you to send executable files, because of virus issues. Executable files are software programs or self-extracting archives (files compressed so they can be opened without a separate program) whose file name ends with .exe. You also may have problems with files transferred from a Macintosh computer.

2. If you have a laptop the Briefcase feature of Windows is an easy way to synchronize files between your laptop and a desktop or network folder.



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