ACPCUG Newsletter

North Canton Public Library, 185 North Main St. North Canton, OH

March 1, 2004

Inside:

March Program:

An all Frank Ramsey Nite!
Stop Popup's + *Q&A* + Privacy Software: Adware, SpyBot S&D, Pest Control

March 2004

Akron-Canton PC Users Group

Cordless Phones Vs. Wireless Network

by Art McRowe, Akron-Canton PC Users Group

The world is networking. Wireless is very attractive for its ease of installation, mobility and rapid cost-effectiveness. The alternative is a hardwired network. Hard wire is cheaper, faster networking, more secure and *less easy to install.* I live in a one story house and the rooms with a computer are all less than 30 ft. from my main computer in the basement. Relatively easy, but still a pain. We went with wire.

My house uses two fixed desktop computers. We have children visit with laptops, all with IEEE802.b built-in. Their computers also have 10-100 Mb Ethernet outlets, just like our desktops.

Our fixed usage would have worked well with either wireless or wired networking. Mobility is problematic. How do I know? I have a cordless phone which works in the 2.4 GHz spectrum, just like the 802.b and 802.g wireless networking protocols. My cordless phone

(Continued on page 2)

(Continued from page 1)
from where in the house I have the phone does not work worth a darn where my downstairs computer is.

Furthermore, near my computer is my downstairs microwave oven, which I dearly love for heating cups of coffee. Folks, the 2.4 GHz spectrum band is where water or more specifically, the –OH bond of water, alcohols (sugars and starches and cellulose (like wood)) and similar structures absorb energy. This is really infrared. Remember, wood is water, cellulose. Concrete is water. Gypsum (wall-board) is water. This is why they are used in fire-safety situations- water slows combustion – and absorbs in the 2.4 GHz band. So is the earth with its water. Rain, even fog, between buildings will absorb signal strength between buildings!

Having said that, wireless is still desirable, if not a requirement, for two-storied homes for retrofitting. Will it work for you? Buy (well don't buy), beg, borrow or steal a wireless phone using the 2.4 GHz band. There are wireless phones using the 900 MHz and the 5 GHz ranges, too. Put the base phone where you'll want your central station. Then try it out all over the house and grounds. Where this phone works is probably a good chance your wireless will work.

You decide on wireless, OK. Get rid of your 2.4 GHz phones and switch to either 900 MHz or 5 GHz phones. Don't use your microwave nearby or at the same time as you're networking on wireless.
Simple, no. Sorry, there is only so much frequency spectrum available. And we are stuck with what we've gotten allocated! Want to go back to the earlier 802.11a specifications? Well watch out, the "a" uses the 5 GHz spectrum. Radiated power of all these devices are in the same 1000 mw range. So they compete with each other. I have read that this competition does not definitely kill the opposing use; it may just slow down the networking with error correction.
Remember, there are repeaters for the 802.11g transmitters available. They *will extend* the range to problem areas. But the theoretical speed is cut **in half**. In practice, it's even slower than that. That is because the same bandwidth is used to first receive, and then, rebroadcast a particular data stream.
Since I choose a wired system, I am not an expert for wireless. But I'd try out the 2.4 GHz phone first, then try to borrow an 802.11g system to experiment with. And remember, a hard-wired system will work with a wireless extension in the problem area of the house. There is a solution!

WHAT IS APCUG?

by Charlotte Semple, President / Editor,

Los Angeles Computer Society, California

The Association of Personal Computer User Groups (APCUG) is an international, platform-independent, volunteer-run nonprofit body devoted to helping user groups offer better services to their members. APCUG is an organization dedicated to helping member computer user groups succeed. It helps to foster communications by operating as an informal network between user group organizations and also with companies that provide computer-related and Internet-related goods and services. APCUG also assists member groups in the fulfillment of their educational missions and activities by sharing with officers of member user groups the knowledge of what it takes for user groups to better serve their members. APCUG operates as a 50l(c)(3) non-profit organization.

Is APCUG a user group?

Absolutely not. APCUG membership consists of user groups, not individual members. While APCUG facilitates information to the user groups and provides information about possible services, it is up to the individual user groups to offer the services to their memberships.

Is membership in APCUG limited to user groups of any particular operating system or platform?

No. APCUG membership is open to all microcomputer user groups. Some of the members of APCUG are computer societies that serve many different platforms.

How did APCUG get started?

The genesis of APCUG came from a series of meetings by representatives from various user groups around the country. Whenever user group officers and directors met, there were continual discussions about the need to improve communication between the groups and to share information such as newsletters, strategies, ideas, etc. As a first step, the presidents from three user groups — Boston Computer Society, Capital PC User Group, and Houston Area League of PC Users - organized the First Annual User Group Summit meeting at the 1986 Fall Comdex. As a result of the feedback from that first Summit meeting and subsequent meetings among user group representatives, the leaders of 15 user groups met in Seattle in October 1987, and proposed the formation of an association for the purpose of fostering communication among and between user groups. That proposal was presented before 130 representatives from 50 user groups at the Second Annual User Group Summit Meeting in November 1987, and was unanimously

(Continued from page 3)
approved.

What is the organizational structure of APCUG?

The primary governing body of APCUG is a 9-person Board of Directors. Each Director is elected for a three-year term, with one-third of the Board elected each year. The Board of Directors is responsible for the implementation of APCUC activities and daily management of the organization. A 15-person Board of User Group Advisors, each of whom is elected for a two-year, staggered term (one-half of the Advisory Board is elected each year), is the ombudsman for their assigned groups and is responsible for proposing new activities or directions for APCUG and for advising the Board of Directors on user group concerns. All of the members of the Board of User Group Advisors are active participants in APCUG-member user groups. In addition, each Member User Group designates a person to act as a representative to APCUG. The APCUG user group representatives are responsible for keeping their group's officers and members up-to-date with information sent to them by APCUG, as well as keeping their group's information in the APCUG database current. They also receive the yearly ballot.

What kinds of things does APCUG do?

APCUG has established and maintains a National Registry of PC User Groups and provides this information to participating groups, publications, and vendors. By making this information available, more groups will be able to take advantage of services provided by manufacturers, publishers, and publications. APCUG encourages hardware manufacturers and software publishers to establish formal user group support programs and provides them listings of APCUG member user groups to facilitate the implementation of such programs.

APCUG provides a number of Internet services, including web pages with information about APCUG, mailing lists for User Group officers to communicate with their peers, Web Space for User Groups, and a number of other services, all accessible through http://www.apcug.org.

APCUG also plans and coordinates user group activities at major computer shows and expositions. These activities include a series of professional development seminars for user group officers; computer product showcase and exposition; the APCUG Summit Meeting held during the Fall conference; computer industry sponsored technology briefings; and sponsored breakfasts, luncheons and receptions. APCUG serves as a

(Continued on page 5)

(Continued from page 4)
clearinghouse for user group resources and vendor programs. In this way, each user group will not have to re-invent the wheel when it comes to creating something like a new member brochure or novice user diskette. Similarly, APCUG has developed a vendor database that summarizes the various programs and identifies the contact person within each company. User groups can then contact the vendors directly to enroll their groups into the programs.

Does APCUG take stands on issues or lobby?

No. It is more appropriate for individual user groups and not an umbrella organization to take positions on issues. As an information clearinghouse, the APCUG can, however, facilitate the exchange of communication on issues and help put user groups in contact with one another. Since the policy in most user groups is that only the Board of Directors can establish policy, it would be inappropriate and harmful for the APCUG to take positions on behalf of its member organizations. If it is to be successful, it is essential that APCUG not interfere or encroach upon the inherent responsibilities of its user group members.

How does APCUG pay for its directors, officers, staff, and offices?

Like many user groups, APCUG is a non-profit organization that depends primarily on volunteer effort. APCUG does not maintain its own physical offices but instead contracts for services on an as needed basis. APCUG employs an administrative assistant who handles updating the database, sends renewal invoices to groups, etc. All director and officer positions are unpaid volunteers. Thus far, many people have stepped forward from individual user groups and volunteered their services to APCUG. This spirit is expected to continue.

How much does it cost to join APCUG?

Each APCUG member user group is assessed an annual membership fee of $50 to help defray administrative and operational expenses.

Is my group a member of APCUG?

Yes. Most APCUG member groups display the APCUG logo on their web page and in their newsletter.

APCUG Member Services

To help new User Groups to form, APCUG offers a collection of informa-

(Continued on page 6)

(Continued from page 5)
tion, including sample Articles of Incorporation and Bylaws. APCUG puts on one or two national events each year. The many Round Table Programs offered are set up to help leaders in running their user groups. There are also Regional Conferences held during the year where user groups can also meet to exchange ideas, share the highs and lows of running a user group, meet vendors, etc. on a more local level.

APCUG provides web space and other web services for user groups that have trouble finding a local ISP to host their web page The WebBoard offers a ListServe for groups to contact their members, chat accessibility for on-line meetings, and conferences for a group's guru to answer technical questions.

APCUG publishes APCUG Reports four times a year, and copies are mailed to selected officers of all APCUG member user groups. It contains many articles to help officers do their jobs better. These reports are also published on the Net.

Newsletter editors can often use more content for their newsletters. The APCUG Editorial Committee emails four to six articles each month to all editors in APCUG member user groups. These articles can then be published in the group's newsletter. Articles are usually written by user group members from around the world.

The monthly NOOZ newsletter from your group's advisor contains information about APCUG and the group's region.

Tips & Tricks for Running your User Group are special articles written to provide assistance to a member user group on some aspect of running a User Group. Frequently they will be based on material presented at a Round Table session at an APCUG or regional conference.

APCUG maintains a Presentation-in-a-Box list that contains information about vendor-provided material that user group members can use themselves to make a presentation at their meeting.

Occasionally, member groups receive information about discounts being offered to their members. Many vendors have special programs set-up for user group members that offer continuous discounts.

APCUG maintains a user group locator on its website which anyone can

(Continued on page 7)

(Continued from page 6)
use to find another user group to arrange joint projects, arrange a vendor tour for several groups, and enable officers to find other user group officers in their area to interact with to discuss topics of interest to the groups.

The APCUG logo is available for use by APCUC member groups. Different sizes of transparent GIF files (color) for the web, and BMP and TIP files (gray scale) for print use are included, as well as AI, EPS, and PSD formats for those who need different sizes or formats than those provided.

Help is just an e-mail away – groups can contact their regional advisor or a member of the Board of Directors. All officers are willing and available to assist APCUG-member groups.

Compiled from information gleaned from the APCUG Website, http://www.apcug.org.

Editor's Note: Your club, ACPCUG, is a member of APCUG. Your dues support APCUG. APCUG has awarded ACPCUG (confusing?**) several awards for community service back when we were distributing older PC's and educating PC usage at several venues. They presently are valuable to us by supplying newsletter articles that we use monthly right here in our newsletter!**
AWMcRowe.

Ergonomic Gizmos

by John R. Chait D.C., drchait@hotmail.com
Member of the Sarasota Personal Computer Users Group, Inc., Florida

How do you use your laptop?

Are you an occasional user who works on your laptop for short periods of time, or are you a full-time user with the laptop as your main computer? Occasional users will have less ergonomic risk of problems developing than full-time users.

Laptop Posture - laptops violate basic ergonomic design requirements, so using a laptop is a tradeoff between poor neck/head posture and poor hand/wrist posture.

Occasional Users- Find a chair that is comfortable and that you can sit back in. Position your laptop in your lap for the most neutral wrist posture that you can achieve. Angle the laptop screen so that you can see it with the least amount of neck deviation.

Full-time Users- Position this on your desk in front of you so that you can see the screen without bending your neck. This may require that you elevate the laptop off the desk surface using a stable support surface, such as a computer monitor pedestal. Use a separate keyboard and mouse. You should be able to connect a keyboard and mouse directly to the back of the laptop or to a docking station.

Use the keyboard on a negative-tilt keyboard tray to ensure a wrist neutral posture. Use the mouse on an adjustable position mouse platform. The design of laptops violates a basic ergonomic requirement for a computer, namely that the keyboard and screen are separated. In the early days of personal computing desktop devices integrated the screen and keyboard into a single unit, and this resulted in widespread complaints of musculoskeletal discomfort. By the late 1970's a number of ergonomics design guidelines were written and all called for the separation of screen and keyboard. The reason is simple, if the keyboard is in an optimal position for the user, the screen isn't and if the screen is optimal the keyboard isn't. Consequently, laptops are excluded from current ergonomic design requirements because none of the designs satisfy this basic need. This means that you need to pay special attention to how

(Continued on page 9)

(Continued from page 8)
you use your laptop because it can cause you problems.

Computer Memory

by Brian K. Lewis, Ph.D.
Member of the Sarasota Personal Computer Users Group, Inc., Florida

Occasionally the question arises as to how much memory can be put in a computer. The answer is "it depends". It depends on just what you mean by memory (RAM or hard disk), what operating system you are using and the capabilities of your computer's motherboard and its chipset. When I talk about memory I am not referring to the permanent storage of programs and data on the hard disk. Rather, I refer to the random-access memory or RAM. This is the memory provided by memory chips seated in slots on the motherboard of today's computers. Anything stored in RAM disappears when the power is turned off, so it is referred to as volatile, or temporary, memory.

If you want to upgrade the memory in your computer you have to be able to determine the memory type as well as the size, pins and speed, the number of slots available on your motherboard and the maximum amount of memory that your system can address. In general, this varies with the age of your computer. So let's look at these components in a little more detail. (Please note that although my remarks refer to Intel's Pentium series central processors, they also generally apply to the equivalent AMD processors.)

Early Pentium based computers had a CPU bus speed of 66 MHz (megahertz) and a PCI I/O bus speed of 33 MHz. These values relate to the speed of data movement within the central processor and transmission to and from peripherals such as the memory bank. In some cases transfer to and from memory was at 50 MHz. Pentium computers generally had four slots which were arranged as two banks. This meant that memory had to be installed in units of two. The memory chips were 72 pin DRAM (dynamic RAM) or SIMM (single in-line memory modules) modules. Many of these computers could support four DRAM modules of 32 MB (megabytes) for a maximum of 128 MB of RAM. There were some motherboards built for Pentium 5 systems that had 2 or 3-168 bit DIMM slots in addition to the 72 pin slots. However, you could not use both the 72 pin and 168 pin slots, only one or the other. These systems would support either 128 or 256 MB of memory. However, at the time, many Pentium/Pentium II computers were sold with only 16 MB of RAM and Windows 95. Later, with Windows 98 the basic memory was 32 MB. In

(Continued on page 11)

(Continued from page 10)
both cases, this is a less than optimum amount of memory for these operating systems. The first Pentium computers had a 32 bit address space which was theoretically capable of addressing 4 GB (gigabytes) of memory. However, none of the motherboards manufactured for these computers carried any such memory capacity.

The next generation of computers carried faster CPUs and chipsets along with faster bus speeds. For example the Intel 440 series chipsets were capable of working with CPUs with speed of 233 - 333 MHz at a bus speed of 66 MHz or with 350-450 MHz processors at a bus speed of 100 MHz. These motherboards generally had 3- 168 pin slots and would support a maximum of 384 MB of RAM. As the address space of the CPU was increased to 36 bit, the maximum addressable memory was 64 GB. However, in practice some computers running Win98 would not recognize more than 256 or 384 MB of RAM. This problem has been ascribed to the chipset design and problem with the L-2 cache. So some caution is recommended if you intend to upgrade the memory in a Pentium II or older system With some of the Pentium III class computers there was an additional increment in bus speed to 133 MHz. The motherboards had 2 to 4 168-pin memory slots. The maximum usable memory of such systems ranges from 512 MB to 1 GB. These motherboards for this CPU class are generally able to use 100 - 133 MHz DIMMs. The 133 MHz DIMMS are capable of working at the 100 MHz speed. The Pentium 4 motherboards came with a whole new array of chipsets and memory chip types and speeds. The maximum memory now ranges up to 4 GB. Intel's initial Pentium 4 motherboards required the use of RDRAM or Rambus DRAM memory chips. RDRAM is a serial memory technology that arrived in three speeds, PC600, PC700, and PC800. RDRAM designs with multiple channels, such as those in Pentium 4 motherboards, are currently the fastest in memory throughput, especially when paired with the newer PC1066 RDRAM memory. A Rambus channel is 2-bytes wide, so we get a maximum 1.6GB/s transfer rate for a single RDRAM channel using PC800 RDRAM or 2.1GB/s for PC1066. The other form of memory chip is the double data rate DRAM. Intel and other manufacturers now have motherboards and chipsets that can utilize these memory modules. They are less expensive than the RDRAM. DDR memory modules are named after their peak bandwidth - the maximum amount of data they can deliver per second - rather than their clock rates. This is calculated by multiplying the amount of data a module can send at once (called the data path or bandwidth) by the speed of the front side bus (FSB). The bandwidth is measured in bits, and the FSB in MHz. Note that the RDRAM bandwidth is in bytes. One byte is equal to 8 bits.

(Continued on page 12)

(Continued from page 11)

A PC1600 DDR memory module can deliver bandwidth of 1600Mbps. PC2100 (the DDR version of PC133 SDRAM) has a bandwidth of 2100Mbps. PC2700 modules use DDR333 chips to deliver 2700Mbps of bandwidth and PC3200 - the fastest widely used form in late 2003 uses DDR400 chips to deliver 3200Mbps (3.2 Gbps) of bandwidth. You may see the term "dual channel" applied to memory. When properly used, the term refers to a DDR motherboard's chipset that's designed with two memory channels instead of one. The two channels handle memory-processing more efficiently by utilizing the theoretical bandwidth of the two modules, thus reducing system latencies, the timing delays that inherently occur with one memory module. For example, one controller reads and writes data while the second controller prepares for the next access, hence, eliminating the reset and setup delays that occur before one memory module can begin the read/write process all over again.

Consider a model in which data is filled into a container (memory), which then directs the data to the CPU. Singlechannel memory would feed the data to the processor via a single pathway at a maximum rate of 64 bits at a time. Dualchannel memory, on the other hand, utilizes two pathways, thereby having the capability to deliver data twice as fast or up to 128 bits at a time. The process works the same way when data is transferred from the processor by reversing the flow of data. A "memory controller" chip is responsible for handling all data transfers involving the memory modules and the processor. This controls the flow of data through the pathways, preventing them from being over-filled with data. Now that you are totally confused by all this memory type and speed terminology, let's look at the next question.

How much memory should you have in your computer? The answer is: probably as much as your motherboard and chipset can handle. For the newest motherboards, that may be excessive unless you are involved in digital video editing or graphic design. For most home users running WinXP or Win2K I would recommend 512MB up to 1GB. So why those figures? I have found that WinXP uses over 200 MB of RAM for its own files, if that much is available. So on a 256 MB system that leaves very little for other applications and data. The net result is a lot of swapping with the virtual memory space on the hard drive. That slows everything down. In WinXP the Windows Task Manager (bring up by pressing CTRLALT-DEL) shows your current performance and the amount of memory available in real time. With 512 MB and several programs running, I have over 300 MB of real RAM available. That greatly increases the responsiveness (speed) of the system as moving data to and from RAM is many times faster than using a hard

(Continued on page 13)

(Continued from page 12)
disk. The Page File window shows you the virtual memory swapping your system is doing. At the moment, mine is zero.

You can do similar analyses on Win98/WinMe systems. The System Monitor application that comes with Windows can supply this information.

However, you may need to modify it to get the memory info you want. Go to Start-Programs-Accessories-System Tools and select System Monitor. If this selection is not available on your menu, then you need to install the program from your original Windows disk or from \WindowsOptions\Cabs file. You do that from the Control Panel (Add/ Remove Software) and Windows Setup. Once you have the system monitor you can ADD memory information by clicking on Edit, then add item. Select Memory Manager. The individual items that will be the most helpful are: allocated memory, unused physical memory, page files in/ out, swapfile in use or swappable memory. The kernel reading tells you how much of your CPU capacity is being used. Generally, Win98/WinME will do very well with 256 MB - 384 MB of RAM. You just have to be certain that your motherboard and chipset can support this much RAM. Most of the home computers I have worked on really don't have enough RAM for the most efficient operation. Does Yours?

Dr. Lewis is a former university & medical school professor. He has been working with personal computers for more than thirty years. He can be reached via e-mail at bwsail@yahoo.com or voice mail at 941/925-3047.

Accessibility for Everyone

by Billy Mabray
Oklahoma City PC Users Group
eMonitor - February 2004

Many people, including a lot of Web designers, think Web-site accessibility is only about making sites work for blind users with screen reader software. Accessibility should be about all of us. There is a wide range of physical conditions that can make using the Web difficult. The Internet can be a frustrating place when you have poor eyesight, color-blindness, or trouble using a mouse. You may not fall into any of these categories right now, but consider this statistic: 100% of Internet users are growing older. At some point, we will all need help navigating the Web.

There are many things that can be done to make the Web more accessible. Some of those things are already built into your Web browser. Others require Web designers to implement accessible features on their Web sites. If you are one of the many people who has difficulty using the Web, you will want to know what help is out there.

One of the biggest complaints people have is that text is too small. It is also the easiest to remedy. If you are using Internet Explorer, choose View>Text Size from the top menu. Also, if your mouse has a scroll wheel, you can hold the CTRL key and scroll up and down to change the text size. Now, this will not work on all Web pages – later, we will discuss why that is and what Web designers can do about it. The Netscape/Mozilla browser, however, can change text size on all Web pages. Choose View>Increase Text Size, or hold CTRL and press the + key.

There are many shortcut keys available for those who have difficulty using a mouse. For example, the backspace key will take you to the previous page, F5 will reload your current page, and ALT plus the Home key will take you to your home page (the page set to load when you open your browser). Also, if you have gone back to a previous page, ALT plus the right arrow will take you forward again. Another useful key on any Web page is the TAB key. You can use the TAB key (and SHIFT plus TAB to go in reverse) to quickly navigate forward through all the links and form fields on a Web page. Once you have tabbed to a form element, other keyboard shortcuts may come in handy. For drop-down boxes, you can use the up and down arrows to highlight your selection. For radio buttons or checkboxes, use the space bar to select your choice. If you are using a recent version of Netscape/Mozilla, you can also use “Find As You Type.” Start typing at any page and it will automatically do a search for what you are typing on that page.

(Continued from page 14)

Some people, particularly the colorblind, find Web sites hard to use because the color of the text does not contrast enough with the background colors. If the color scheme of your favorite Web site makes it difficult to read, you can override that as well. You will find this under Tools->Options or Edit->Preferences, depending on your browser. You can set your default fonts, font sizes, and page colors. You can also specify that your defaults always override what is set by the Web page.

While these browser features can be helpful, there is still much Web designers must do to make their site accessible to the widest possible audience. A good example is text sizing. If Web designers use fixed text sizes – sizes that specify an absolute unit of measurement, such as points or pixels – on their pages, Internet Explorer users cannot change their text size as I described earlier. Web designers can, and should, use relative text sizes to make their pages more accessible. Designers who prefer to use absolute sizes for text should provide a "style switcher." This is a link on the page that allows the site's visitor to make the text bigger and saves that preference in a cookie.

Another accessibility feature that some designers use is access keys. These are just like the shortcut keys I mentioned earlier; except they are defined by the Web page you are on. For example, the designer could define ALT plus 4 to take you directly to the search function. If you visit a site regularly and know their access keys, they can be useful.

Web designers should also use labels for forms. Labels make the text next to a form field clickable, just like the field itself. For example, if a form has a checkbox that reads, "Click here to subscribe," and that text is set as a label, the user can click anywhere on that text to check the box. It can be very helpful to have a larger target when trying to click things with a mouse.

We still have a long way to go before the Web is accessible to everyone. But now you know some of the helpful features you have at your fingertips already, and you know what to ask for from the Web sites you frequent. Hopefully, as users learn what they can do, and designers learn what they need to do, we can all enjoy the Web a little more.

Billy Mabray and his wife, Angela, own Smart Goat, a local software development and web design business. They are members of the OKCPCUG. Comments or questions on the article are welcome and can be addressed to: billy@smartgoat.com.

Hi! I'm from the Government and I'm Here to Help Your Computer

By Ira Wilsker

Our computers are apolitical inanimate machines not influenced by our personal politics. While we as individuals may differ in our beliefs of how much the government should be involved in our personal computing, there is an increasing amount of influence government agencies are having in our routine computer utilization.

Recently the U.S. Department of Homeland Security, acknowledging the role that our personal computers have in national security, announced a series of email alert services to notify us of potential cyber attacks and other threats to our cyber infrastructure. As has been explained previously in this column, our computers and net access have become a potential target of terrorism, and can be utilized to launch cyber attacks without our knowledge. As I type this, the Utah based software company SCO, has had its net access shut down because it was one of the targets of a denial of service attack launched from countless thousands of computers infected with the "A" version of the MyDoom worm. The free alert system from the Department of Homeland Security, coincidently announced as the MyDoom worm infected millions of machines and slowed down the net, is available both online and by email subscription at www.us-cert.gov. Warnings will be posted on this site, and emailed to subscribers as soon as they are released. The free email alerts are listed at www.us-cert.gov/cas/index.html and distributed in four varieties. Two of the alerts are highly technical versions, and two are non-technical "plain English" versions. If you decide to subscribe to these free alerts, be sure to follow the subscription instructions explicitly. In order to prevent the unauthorized "spamming" of subscriptions, a double opt-in process is utilized. When you send the initial email subscription, a confirming email will be sent by the email list server containing a unique reply code; be sure to follow the instructions exactly in that reply email in order to effect the subscription.

The "Technical Cyber Security Alerts", as listed on the US-CERT.GOV website, "…provide timely information about current security issues, vulnerabilities, and exploits." The other technical alert is "Cyber Security Bulletins" which "…provide bi-weekly summaries of security issues and new vulnerabilities. They also provide patches, workarounds, and other actions to help mitigate risk."

For those interested in less technical, but otherwise current and

(Continued on page 17)

(Continued from page 16)
helpful information, a pair of non-technical alerts is available. One is "Cyber Security Alerts" self-described as, "…provide(s) timely information about current security issues, vulnerabilities, and exploits … that affects the general public. … (and) outline(s) the steps and actions that non-technical home and corporate computer users can take to protect themselves from attack." The other non-technical alert is "Cyber Security Tips" which "…describe(s) common security issues and offer advice for non-technical home and corporate computer users."

These alerts will contain a verifiable electronic signature to ensure that they are really valid alerts, and not some misleading spam intended to spoof authentic alerts and mislead victims. Despite such precautions, there has been some concern that these alerts can still be falsified, leading to the type of damage that they are intended to warn about. In a recent statement released by Senator Charles Schumer (D-NY), "If I were a betting man, I'd put a few dollars down that the next virus that clogs computer networks is going to be transmitted through an e-mail that looks like one of these DHS e-mail alerts."

All four of these alerts, as well as the concurrent information posted on the US-CERT.GOV website, are intended to supplement, not replace, similar alerts already distributed by such cyber security companies as Symantec (Norton), Network Associates (McAfee), Panda, Sophos, F-Secure, Trend, and other publishers of antivirus, firewall, and internet security software and services.

In a less fearsome mode, there is a helpful service available from the quasi-governmental agency, the U.S. Postal Service, to assist businesses, organizations, and individuals who mail items using "Priority" or "Express" mail. Small quantity users can use a free online service "Click-N-Ship" available at www.usps.com to generate and print mailing labels, complete with tracking number bar codes. Larger volume users of Express and Priority mail can download a free utility, "USPS Shipping Assistant Software" from the Postal Service to generate mailing labels on their own computers. Available for free download from www.usps.com/shippingassistant, this interesting utility can be used to track and confirm deliveries, verify zip codes, create mailing labels, calculate domestic and international postage, calculate delivery times, create and store address books, and even generate merchandise return labels. The labels themselves, complete with barcodes for tracking, are typically printed one or two to an 8.5 x 11 sheet of self-adhesive labels. Labels are available from the Postal Service website from a private contractor, our local office

(Continued on page 18)

supply stores, or online. I recently used both the free online label service, and the "USPS Shipping Assistant 2.2" I recently downloaded to prepare labels to mail merchandise to my kids. I found both were easy to use and produced excellent quality labels on my printer. I then used both the free online tracking on the USPS.COM website and the online tracking service integral with the Shipping Assistant software to track the packages, and both worked equally well.

Now that computers have become a ubiquitous part of our daily lives, it is inevitable that we will see more governmental involvement and assistance with our daily computing.

Ira Wilsker is the Advisor for Region 8, APCUG Representative & Bylaws Chair for the Golden Triangle PC Club, a columnist for The Examiner in Beaumont, Texas, and has two radio shows. He also graciously shares his articles with the APCUG editors.

IRS Again Offers Free Online Filing Services

By Ira Wilsker

We should have received all of our W-2's, 1099's, and other tax forms by now. Many of us struggle filling out tax forms manually, trying to decipher forms that have so many links and connections you feel that you have to be a genius octopus to connect all of the parts. Some of us use one of the popular tax software packages such as Tax Cut or Turbo-Tax, and others use accountants or commercial services to prepare our most dreaded of forms.

For those looking for an alternative, the IRS is again coordinating a variety of free online filing services.

The logical starting place is the IRS website at www.irs.gov. At the top of the page is a link "Free File – Start Here for Free Online Filing". Clicking on the link opens a new page with pre-filing tips, step-by-step instructions, and a "help center" with frequently asked questions.

While the free filing services are coordinated and regulated by the IRS, the services themselves are provided by a number of individual profit seeking companies or non-profit organizations. Any company listed is prohibited from mandating the purchase of any additional services, and the listed services must be absolutely free to those qualified to use the services.

The IRS site also states, "IRS Free File does not endorse Refund Anticipation Loans (RALs) or any other advance refund banking products".

The site also states that your privacy and financial information will be protected by the providers listed, and that these providers must meet commercial privacy and security standards, and be certified as such by a recognized issuer of privacy and security certifications.

The process of getting started is a rather simple three step process.

First is the "Start Now" button on the "Free Online Filing" web page; second is a determination of eligibility, as different providers have different requirements; finally the third step is linking to the private provider's website, separate from the IRS site. If you find that you are ineligible for a particular company's free offerings, simply return to the IRS site and repeat the process by selecting another likely service. It should be noted that while millions of us are eligible for these free services, many of us will find that we are ineligible for any of many reasons. Once a satisfactory service has been selected, then the tax return information is completed online, with the completed documents being "e-Filed", or electronically filed with the IRS.

Fifteen online providers of free filing services are listed. Each has

its own requirements that may be based on residence, income, age, military status, and other factors. While some services are clearly for lower income individuals, some of the free services are available for individuals who have an adjusted gross income (AGI) of up to $100,000. Some are available to residents of specific states, regardless of income level. None of the listed services offered free filing to Texas residents without regard to income level, though an even dozen of the services are available at no charge to Texas residents who meet other requirements. One of the services, FreeTaxUSA, is listed as available to all Louisiana residents at no charge.

Several of the companies listed provide free service to all active duty military personnel, regardless of residence or income. Some services provide unrestricted service based on age, either younger than early 20's, or older than 62 years of age.

For those unsure about which service to consider, a button on the IRS page "Guide me To A Service!" uses a simple form to direct the user to appropriate services based on a short series of personal questions. These questions are age, estimated adjusted gross income, state of residence, number of W-2 forms, possibility of using a form 1040EZ, probable eligibility for the "Earned Income Credit", and military service. Once completed, a list of likely service providers is presented, allowing for the user to easily choose a provider.

All of the providers in what the IRS refers to as the "Free File Alliance" provide for electronic filing of tax returns. E-Filing, as the IRS calls it is relatively safe and secure, and, according to the IRS website, can generate refunds in as little as 10 days, with faster refund service available to those who select having their refunds direct deposited to their bank or credit union accounts.

While these services are freely available online at no charge to many, they may not necessarily be the best alternative. Even if eligible to utilize one of these free services, the onus of decision making is solely on the individual, as most provide no comprehensive tax advice, meaning that it is quite possible for the user to miss deductions or credits that he may be eligible for, thus overpaying. It is also the responsibility of the user to accurately and completely enter data, as there is no one to verify the accuracy of the data entered. To use an early cyber cliché, "GIGO", which means "Garbage in – Garbage Out", the final return can only be as accurate as the information entered.

Clearly, the free filing alternatives may be attractive to many individuals, but for many others the more traditional tax preparations resources may be a superior alternative. The choice is yours; choose wisely.

Ira Wilsker is the Advisor for Region 8, APCUG Representative & Bylaws Chair for

the Golden Triangle PC Club, a columnist for The Examiner in Beaumont, Texas, and has two radio shows. He also graciously shares his articles with the APCUG editors.

There is no restriction against any non-profit group using this article as long as it is kept in context with proper credit given the author. The Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member, brings this article to you.

PCI Express: Say Goodbye to AGP and PCI Slots

By Timothy Everingham, TUGNET

teveringham@acm.org

Those of you who have been around personal computers for a while might remember plug in cards slots referred to as ISA, EISA, Microchannel, and VESA Local Bus. ISA, EISA, and Microchannel were replaced by PCI. VESA Local bus was primarily for video cards, which was replaced by PCI, then AGP slots. It was a fun time during these card slot transitions because many times you could not use the plug in cards from your old machine in your new computer or motherboard or if you did it could slow down the entire system. Well guess what, its time to do it all over again. Intel has come up with a new slot standard PCI Express, which will start to show up in computers/motherboards this spring.

PCI came out in 1992. Today these slots and its data bus technology are used for things not envisioned when it was under development over 12 years ago. PCI has its limitations and the PCI pro slots never became popular. The limitations are coming to the forefront in delivering multimedia content and Gigabit Ethernet. Of course getting higher frame rates at higher resolution and quality for video games also is an issue. PCI has been evolving over time increasing its speed to five times the original, but it has reached its limits of development. Many say that stretching out the AGP to 8x speed might be pushing at its limit too.

First let us look at the current PCI architecture you will find on most motherboards. The CPU/Microprocessor communicates with the first of two data bridges, normally referred to as the Memory Bridge or Northbridge. The Northbridge not only communicates with the CPU; but also communicates to the AGP port, which is where your main graphics card is (usually the only graphics card). It also communicates with your RAM. The fourth thing it communicates with is the second data bridge, known as the Input/Output (I/O) Bridge or Southbridge. The Southbridge also communicates to your plug in slots/cards, drive controllers, and USB, Fireware/1394, parallel. serial, game, keyboard and mouse ports.

The theoretical speed limit of the Southbridge communication to I/O including the PCI slots is 133 MB/second. All of the communications in the system are parallel with none of the data having any priority over any other. Blocks of data have to be sent one at a time and cannot be done concurrently. Therefore the data is transferred from one section of the motherboard to the next section based on the order received, not the importance or whether a piece of data arriving by a certain time to its destination is critical.

PCI Express, instead of using a parallel bus architecture, uses serial networking typology with only two wires for each direction. At higher speeds, it allows concurrent transfer of data while having a similar look and the same type of Northbridge/Southbridge architecture as currently in desktops and laptops.

However, in servers the Southbridge is eliminated producing greater data throughput. The PCI slots initially have a 250 MB/second throughput, but the scalable width technology (increasing the number of wire pairs) enables slots and cards to communicate at 32 times that speed in later implementations using longer slots. But the typology can also use network switching type technology, giving data priority and quality of service functions. Hot plug/swap of components is a native part of the architecture.

The PCI Express Graphics Port, replacing the AGP Port, will have a 4GB/second transfer rate in its initial configuration, double that of the current 8x AGP ports. For laptops units there will be a new plug-in card to replace PCMCIA called ExpressCard. It will come in two forms, one that more looks like a PCMCIA card refereed to at the 34 module form factor (34 x 75 x 5 mm) and a more oversized L looking card called the 54 module form factor (54 x 75 x 5 mm). This new architecture is compatible with existing operating systems. Also the new PCI Express slot is capable of being placed alongside current type PCI slots so a choice can be made which type of card can be used in a motherboard just like was done with ISA slots and current PCI slots. The standard PCI Express slots being put in motherboards this spring (1x) will be a lot shorter than the standard PCI slots.

All of this will mean that a lot of issues having to do with multimedia on desktop and laptop computers will have been solved. It also opens wider use of Gigabit Ethernet on local area networks. It also enables the prospects of new motherboard form factors and computer case designs. As the transition from ISA to PCI was an interesting transition with com-

puter buyers having to do more research and planning on their purchases, the move from PCI to PCI Express will do the same. However, as was with the previous transition, the performance and capability increases of computers will be profound. Further information on PCI Express can be found at www.express-lane.org.

Timothy Everingham is CEO of Timothy Everingham Consulting in Azusa, California. He is also Vice Chair of the Los Angeles Chapter of ACM SIGGRAPHand is also on the Management Information Systems Program Advisory Board of California State University, Fullerton. In addition he is the Vice President of the Windows Media Users' Group of Los Angeles. He is also part-time press in the areas of high technology, computers, video, audio, and entertainment/media and has had articles published throughout the United States and Canada plus Australia, England, & Japan. Further information can be found at http://home.earthlink.net/~teveringham

---

Please note that we do not have "The Deals Guy" this month.

Our meeting just comes too early for Bob Click to get his article out this soon.

If I get it soon, I will send out a supplementary e-mail newsletter!

Art McRowe, ACPCUG Newsletter editor

Note: Meeting Place:
North Canton Public Library
185 North Main Street
North Canton, OH 44720
I-77 Exit (Portage) turn *EAST*.
From Rt.77, take the Canal Fulton/North Canton Exit (Portage St.)

Head east on Portage St. (If traveling north, you will turn right. If traveling south, you will turn left.) Follow Portage for approximately 1 1/4 miles to a sign that reads: "All thru traffic bear left." ***Do not*** bear left. Continue straight on Portage until it dead-ends at Ream St.

Turn left on Ream. The Library is the 2nd building on your right. Small amount parking alongside and more across the street at rear of building.

Upcoming Computer Shows:

Peter Trapp at Tadmor Temple, Sunday, March 13th, 2004
3000 Krebs Drive, Akron, OH.
Exit 120 off I-77 (Arlington Rd.)
Right on Jarvis. Right on Krebs to top of hill. 10am-3pm

Please note change in contacting ACPCUG Newsletter Editor
New e-mail address: acpcugnews@yahoo.com

Club Officers area code 330, unless noted otherwise			
President	Murray Davis (2003)	440-248-0021	murray5050@yahoo.com
Club Outreach	Rick Lubinski (2002)	928-7179	lubinski@bright.net
Secretary	Walt Ruthenburg (2003)	283-7867	wruthenburg@usa.net
Vice President and Program Director	Frank Ramsey (2001)	699-4711	aframsey@yahoo.com
Treasurer	Jim Albright (2004)	923-8686	jra823a@netscape.net
Newsletter Editor	Art McRowe	666-3189	acpcugnews@yahoo.com
Software Evaluation			