Phoenix PC Users Group

NEWSLETTER

The Best Accessory for your PC !

MAIN MEETINGS

West Side………………..Tue, Dec 20

CollegeAmerica, 9801 North Metro Pkwy E, Phoenix

East Side………………Wed, Dec 21

2625 W Baseline Rd, Tempe
(one block west of Fry's Electronics)

Fountain Hills…………..Thu, Dec 22

Fountain Hills Library, 12901 N La Montana Drive,
Fountain Hills

Presentation this month:

IT'S OUR ANNUAL HOLIDAY PARTY

This year it's a Cooperative Venture
If you have a new Electronic Gadget bring it for
A Show and Tell Segment
For Food and Drink Members are asked to bring something
For Example
A variety of Cheeses or Meat Cubes or Crackers or Soda

For date and time changes, check our
website: phoenixpcug.org

THOUGHTS FOR THE MONTH

FROM YOUR PRESIDENT

Merry Christmas, Happy New Year!

Dues are due!! Please bring a friend to our year end party, some goodies to eat, please bring a favorite if you can, we'll supply drinks and maybe more (maybe some pizza!) (A donation is always helpful to defray the goodies.) Also, email us if you come - to budget better.

Now some business - Elections, this month at College America. So far possibly 2 candidates, Bill Aulepp & yours truly. We still are seeking a Treasurer and VP. The newsletter we might be able to rotate among two publisher/editors - switching between them - so only one pub/editor works any given month. Anyone interested?

Meeting topics - End of the Year Review - 2011 best of the year series from various sources, featuring Gadgets & Gizmos, always Q&A, possibly a Holiday presentation from a past member on Wed. at UAT, plans for the new year, etc.

Bill Aulepp & I visited AzStRUT - students recycling used computers at their HQ, very interesting, lots of ideas for new members, Tom Mehlert is their director.

College American and Anthem College both have sought our members' input to improve their programs and we many ideas for them, such as a laptop based toolkit - network analyzer, volt-ohmeter, oscilloscope peripherals.

We hope to visit HAM & Astronomy clubs to introduce ourselves and seek new members. Other ideas are worth looking into as well.

See you all soon and have a great holiday season!

David

FROM YOUR EDITOR

What ever happened to "user friendly"? Back in the dark ages of computer usage, (measured in decades in real time, but generations past in the history of computer/transistor/integrated circuit usage), this term was used to convince the wary majority of non-computer users that these machines could be used in a routine manner as easily as an electric typewriter. It was almost true.

Yes, it did not take a lot of instruction to learn how compose, print, and save letters and other documents. The ease of correction and editing of text were lauded. But computer usage became a little more complicated when the Internet came into widespread use.

Passwords soon became the first stumbling block. The requirements for password creation and usage (length, upper or lower case, alphabetical and/or numerical characters, banning of certain key board strokes, etc.) became, and still is, an annoying stumbling block. The most laughable result connected with the use of an elaborate password is the difficulty of remembering what your "secure" log-in name and password actually are. This is especially true for individuals who may have the need to use multiple machines on a daily basis. Pity the administrative assistant (formerly called the secretary) to four or five professionals, each of whom has trouble remembering names and faces of their colleagues, much less their own passwords.

The whole concept of "secure" is compromised by the need to compile a paper list of names and passwords. (There are noted cases of individuals storing such a list in a computer file – sounds silly until you hear news reports describing the penetration of tens of thousands of e-mail addresses of government or business files. Where do you suppose all of those e-mail addresses were kept?) And the most recent procedure that has become the norm as a step to forestall the compromisation of vital data is the requirement to change a password at periodic intervals; six months or every semester is common. Furthermore, to really beef up the challenge to a hacker, the user is not allowed to propose a new password that is too similar to the previous password.

Well, okay…but don't forget to write it down somewhere.

Michael

MEETINGS

CALENDAR

For date and time changes, check our website: phoenixpcug.org

PRESENTATION THIS MONTH

IT'S OUR ANNUAL HOLIDAY PARTY

This year it's a Cooperative Venture
If you have a new Electronic Gadget bring it for
A Show and Tell Segment
For Food and Drink Members are asked to bring something
For Example
A variety of Cheeses or Meat Cubes or Crackers or Soda

GENERAL MEETINGS

WEST SIDE: CollegeAmerica (see map page 18)
  - Tuesday, Dec 20, 2011
  - 6:00 PM - Steering Committee and Election of Officers
 - 6:30 PM - Q and A
  -

EAST SIDE: University of Advancing Technology (see map page 18)
  - Wednesday, Dec 21, 2011
  - 6:30 PM - Q and A
  -

FOUNTAIN HILLS: Fountain Hills Library (see map page 18)
  - Thursday, Dec 22, 2011
  - 6:30 PM - Q and A
  -

BILL'S PONDER THIS
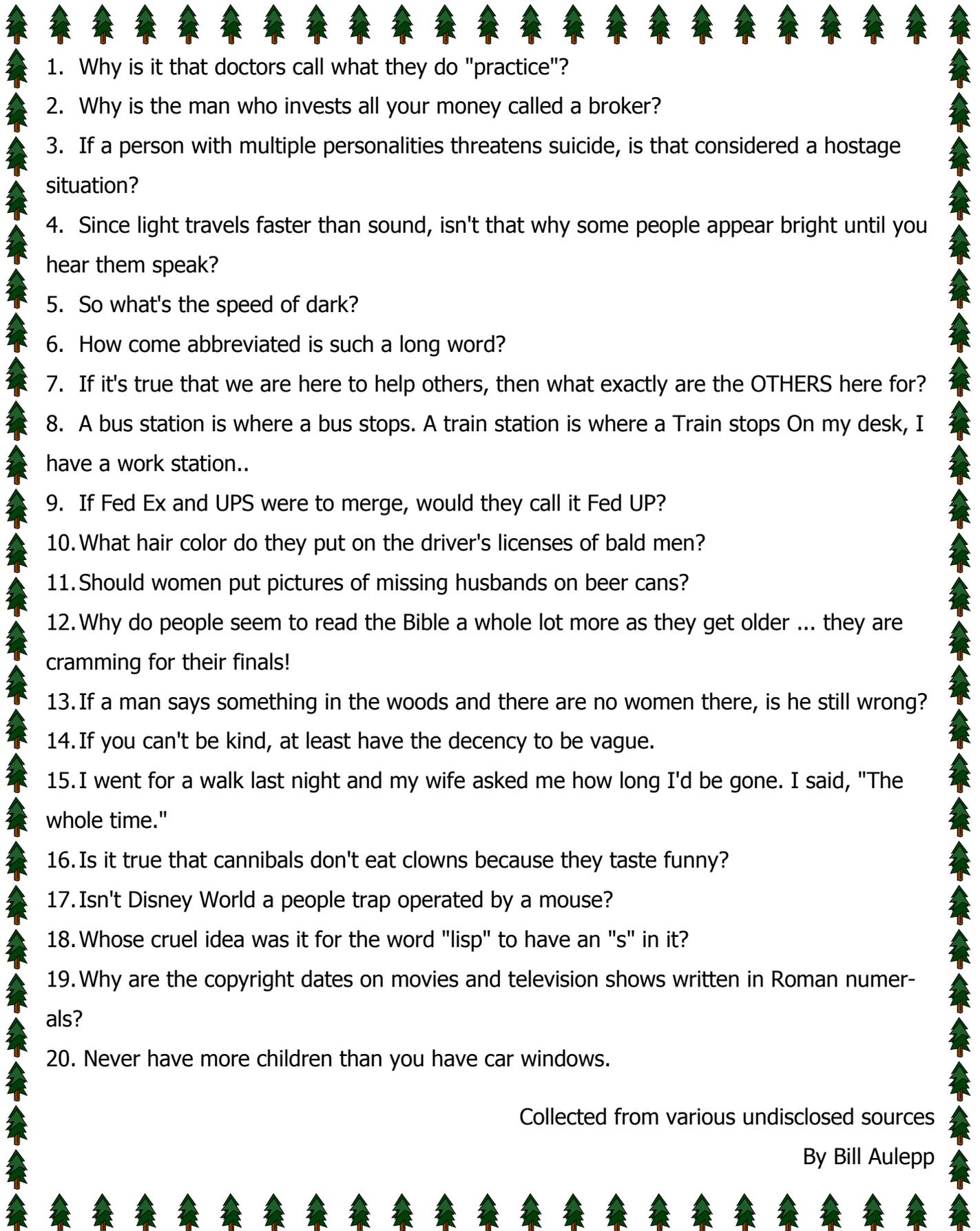
1. Why is it that doctors call what they do "practice"?

2. Why is the man who invests all your money called a broker?

3. If a person with multiple personalities threatens suicide, is that considered a hostage situation?

4. Since light travels faster than sound, isn't that why some people appear bright until you hear them speak?

5. So what's the speed of dark?

6. How come abbreviated is such a long word?

7. If it's true that we are here to help others, then what exactly are the OTHERS here for?

8. A bus station is where a bus stops. A train station is where a Train stops On my desk, I have a work station..

9. If Fed Ex and UPS were to merge, would they call it Fed UP?

10. What hair color do they put on the driver's licenses of bald men?

11. Should women put pictures of missing husbands on beer cans?

12. Why do people seem to read the Bible a whole lot more as they get older ... they are cramming for their finals!

13. If a man says something in the woods and there are no women there, is he still wrong?

14. If you can't be kind, at least have the decency to be vague.

15. I went for a walk last night and my wife asked me how long I'd be gone. I said, "The whole time."

16. Is it true that cannibals don't eat clowns because they taste funny?

17. Isn't Disney World a people trap operated by a mouse?

18. Whose cruel idea was it for the word "lisp" to have an "s" in it?

19. Why are the copyright dates on movies and television shows written in Roman numerals?

20. Never have more children than you have car windows.

Collected from various undisclosed sources

By Bill Aulepp

A TABLET FOR THE HOLIDAYS

A TABLET FOR THE HOLIDAYS

By Vinny LaBash, Regular Columnist, Sarasota PCUG, Florida
November 2011 issue, Sarasota Monitor
www.spcug.org
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The first thing you need to know about buying a tablet is that you are not going to get top dollar performance for a bottom dollar price. You get what you pay for. Buying one of these devices based on price is a guarantee of disappointment. Deciding on which tablet to buy, either for yourself or as a gift, should depend generally on what you plan to do with it.

Most people who buy these devices have some mixture of the following in mind: playing games or computer-specific tasks. E-readers do one thing very well; they are designed for reading magazines and books. Barnes and Noble's Nook Color has a seven inch multi-touch screen which is also great for web browsing and playing casual games. Bejeweled looks spectacular and the traditional Microsoft games work well. You can play Angry Birds too.

A nice feature is the ability to read magazines in full color. It's a much more satisfying experience than traditional black and white even though it doesn't improve content. The Nook Color is great for watching short videos. Even the biggest smart phone screen can't come close to matching it.

Amazon is scheduled to release an updated version of its Kindle e-reader in time for the holidays. It's not available now so we can't comment on it. What we can say is if an e-reader is something you are interested in, be sure to check out Amazon's new product before buying.

If you are sure you want a tablet, resolve to get a good one or don't bother. If you end up with a cheap underpowered unit with too little processing power or memory to save money, you will end up frustrated for as long as you own the device. You want a processor with a speed greater than 1GHz, lots of memory, and a responsive touch screen.

Good specifications are a must, but they are not the whole story. The decisive factor should be about how the tablet fits to the way you want to use it. If you're considering an Android device, get your apps from the official Google Android Market. It's the only way to be sure that the app is properly integrated with the Android software.

With seemingly every manufacturer on the planet trying to knock off the iPad, new ones are appearing in the marketplace almost daily. There is no way to keep track of all of them, so if you're dying to know what your options are, here is a general overview of the tablet landscape.

The iPad is king and unlikely to be dethroned in the near future. This tablet requires almost no learning time, and its ease of use remains unsurpassed. The number of apps, games and media available for it far exceeds that of any other competitor. It was designed as a cloud computing device, which means that data is not stored on it, making it inherently secure. You should try it before making any final decisions.

Android-based tablets offer the next most widely available set of alternatives if the iPad's price, size or capabilities fail to meet your requirements. They are also cloud based devices making them perfect for retrieving information anywhere an internet connection is available.

Tablets running Windows software have been around for over a decade. They continue to improve and evolve, but they are still inferior to the iPad and Android systems. They resemble laptops more than anything else with their wide variety of physical keyboards. If a Windows environment is what you're looking for, look no further. Microsoft plans to release Windows 8 sometime next year, and perhaps that will be the catalyst to propel these systems to a more prominent place in the minds of potential customers.

Before being carried away with the immersive experience of a tablet, it may be wise to consider why they might not be right for you. If you like the portability of a smart phone especially the ability to carry it in your pocket, that's an experience you won't get with a tablet.

Laptops have far more horsepower than the most powerful tablet. If power is what you need, a tablet may let you down. If computer power is your heart's desire, an inexpensive laptop is probably a better choice.

Common shortcomings among most tablets are lack of a replaceable battery, poor printer support, and awkward virtual keyboards. In addition, lousy business software smudgy screens, and compatibility problems with Adobe Flash are often cited among tablet users.

If your typical work day finds you heavily involved with creating and editing lengthy documents, large spreadsheets, PowerPoint presentations, and lots of email, visions of using a tablet productively may be delusional.

A high end tablet can go for around $800. A decent laptop or smart phone can be picked up for less and probably do more. Forget price for a moment and take the time to evaluate what you expect from a tablet. Is it really a better value for you and a better fit than a good smart phone or laptop? If the answer is yes, then go for it.

CHOOSING A SMART PHONE

CHOOSING A SMART PHONE
By Sandy Berger, CompuKISS
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There are so many different smartphones available today that choosing between them can be difficult. Each phone and each operating system has many different pluses and minuses. So today, I'll give you a brief rundown of what you can expect in a smart-phone.

Windows Mobile cell phones are just coming of age and they may well be a good choice in the future. However, right now the choice will probably come down to choosing between the Apple iPhone and one of the many Android phones that are now available.

The Android operating system is upgraded several times a year and new Android phones are released all the time. Apple, however only releases a new iPhone and a big update to their iOS operating system once a year. The new iPhone and iOS updates were released in October. The new Android phones running Gingerbread, the most current Android operating system, will be on the market this month (November 2011). So today we will talk about Apple and Android, and do a quick comparison of the current phones and operating systems for each.

Since it is so new, I haven't yet been able to review the new iPhone 4S. However, I have reviewed previous iPhones. I have also installed Apple's new iOS 5 operating system on my iPad, so I have been able to take an in-depth look at most of the new features that will be on the new iPhone. Now I am ready to make my list of the benefits of each.

There is no doubt that that the camera on the new iPhone is superior to almost all the Android phone cameras. The retinoid screen on the iPhone is superior to most Android phones. The exception is the Samsung line of phones with AMOLED screens that rival the clarity and crispness of the iPhone screen.

Apple's new iCloud service will automatically backup your iPhone to Apple's servers and let you sync your IPhone, iPad, and Mac computer. While using iCloud is easier than some of the Android syncing and backup solutions, there were things that I didn't like about iCloud. For instance, you can't actually see your data in the Cloud as you can with solutions like Amazon's or Google's online storage.

One of Apple's biggest features is iTunes and the iTunes store. iTunes makes getting music and video on your iPhone easier than any Android application that I've seen. At this time, both the Android Marketplace and the iTunes App Store have hundreds of thousands of apps. The iTunes App Store, however, makes it easier to find the apps that you want. Also because of Apple's stricter app reviews, Apple's apps are more secure. However, the Android Marketplace has a higher percentage of free apps.

Some of the new features on Apple new iPhone are already available on Android phones. The most prominent of these is the Notification Center that Apple just added. This is a feature of Android that has been around for a long time and that I love. Now in either operating system, you can just swipe your finger down from the top of the phone to see all of your alerts, notifications, incoming messages, and incoming email.

The most unique feature of the new iPhone is Siri, a personal assistant who will answer verbal questions that you ask. This would, no doubt, be very useful, entertaining, and truly state-of-the-art.

Android phones also have voice capabilities. They use Google's Voice Search. Most screens that popup a keypad for text entry, also have a small microphone. Just press the microphone and speak. It is amazingly accurate and you can use it for everything from entering email text to searching to navigating to a point on the map. Probably not as sophisticated as Apple's Siri, but it works well.

My biggest disappointment with the new iPhone is that it is a 3G phone. It does not take advantage of the faster 4G network. Right now the fastest phone for data will be the Android 4G phones that run on a

CHOOSING A SMART PHONE   —   THIS AND THAT

(Continued from page 6)

4G LTE network. If Verizon currently has 4G LTE network in your area, you may want to consider a 4G Android phone rather than the iPhone 4S.

Android phones also have some things that I love that are not available on iPhones. The first of these is the fact that you can get a larger screen size on an Android. All iPhones currently have a 3.5-inch screen. Several good Android phones have 4.3-inch screens. My aging eyes really like the larger screens.

I also like the four buttons on the bottom of the Android screen. These are very, very useful. There is a Back Key, a Menu Key, a Home Key, and a Search Key. They are always available. They do not change when the screen changes. The iPhone has just one button. Some will argue that this makes the phone easier to use. Yet, this is not always the case. In some applications it is impossible to go back a screen. In others there is an on-screen back button but the location of this button varies with each application. With Android, you can always go back to the previous screen with just one press.

The Android operating system also is more customizable. With Apple, you are restricted to small square apps. With Android you can use many different resizable widgets as well as the standard apps. All of this gives you many different customization options, but also adds to the complexity of the phone. With the iPhone you don't get so many choices. This makes it a bit more restrictive, but also makes it easier to use.

On other difference is that most Android phones have user-replaceable batteries, while an iPhone battery must be replaced by Apple at a greater cost. While this might not be important to the average user it may make a difference to a heavy-duty user.

Well, there are just a few of the pluses and minuses you will have to assess when you buy a new smartphone. Don't worry though; it is hard to make a bad decision as almost all the smartphones on the market today are both capable and useful.

THIS AND THAT
By Elizabeth B. Wright, Member, Computer Club of Oklahoma City
November 2011 issue, CCOKC eMonitor
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As the birds gather to plan their trip South for the winter, so do some of us. But what to take with us? Lighter weight clothing for that hoped for sunny climate, although experience tells us we can't really get far enough South in the continental USA to guarantee that. Maybe the mountains for skiing. But along with our necessities, some
of us now take along our link to the world, our laptop computers.

Are you driving or flying? Either way, I have found that the smaller Netbook type computers are easier to carry. Even with accessories, they usually weigh less than
laptops. And with the right add-ons, they can be every bit as useful as their larger cousins.

My accessory kit contains a USB connected 750G hard drive, very compact and light, a
reduced size USB keyboard (easier to use than the netbook keyboard) and a small mouse. Of course you can tailor your kit to suit yourself.

When flying, in addition to the USB hard drive, I pack several USB flash drives, the higher capacity the better. Because part of traveling is the opportunity to take pictures,
with digital cameras it is possible to download them to the external hard drive or to the flash drives in order to have backup copies of them. Many netbooks have rather smallish internal hard drives, so having extra storage capability is great.

Another advantage to the Netbook computers is the small size makes it easier to put them in a hotel room lockbox along with the USB flash drives and/or the USB external drive. The mouse will also fit, but the smaller size keyboard may not. But since the external keyboard is not essential to using your computer, you can better risk leaving it in your suit-

THIS AND THAT

case when out of the room. Nothing left in a hotel room is 100% safe, so keep that in mind.

The other great advantage to traveling with your computer is access to the internet. However there are some security risks involved with connecting to free Wi-Fi networks like those available in many restaurants, airports, hotels, etc. Take time to search the internet (from home) for information on how to best insulate your laptop from the bad guys.

Each computer is different and you will have to determine what will work best for you. Most netbooks and laptops now are built with Wi-Fi capability. This can be programmed to only connect when you tell it to. The default is usually to connect whenever it detects an open network. This can be risky.

Some networks are secured and require a password to connect, but others are open to
the world. Before leaving home, check with whomever you know to be knowledgeable
about securing your netbook/laptop while surfing the internet from free Wi-Fi locations.

Most of what I keep on my netbook is not particularly valuable to anyone but me, but
there are some passwords which I would prefer to keep private. One bit of advice is to avoid transacting banking business or other financial business online from public Wi-Fi sites. The same source for this information, which was quoting the FBI, also said not to go onto the internet.

But mostly that is what we want to do when using our computers away from home. It does leave us in a bit of a pickle. Thousands of people at any given time are using these networks. Just go into any national bookstore chain that boasts a coffee shop and most of the tables will be filled with people working diligently on their computers.

As for passwords, the old advice to change them often is as valid today as in the past. Especially those used for accessing your email and other personal websites. A paper list of the email addresses you plan to contact while away from home or office is preferable to keeping the same list on your com-

puter. I keep mine in the safest place I can manage, either the hotel room lockbox or as close to my body as possible. Keeping it in a purse or billfold is risky, but if all else fails it beats leaving it lying around the hotel room.

The main reason for making sure it is safeguarded is to keep it from prying eyes (including anyone who might just photograph your list and leave it where they found it). This step is a courtesy to your friends, relatives and business contacts that are on your list.

Happy Traveling….

FLICKR: A LOOK INSIDE THE PHOTOSTREAM

FLICKER: A LOOK INSIDE THE PHOTOSTREAM
*By Larry Klees, member, Orange County PC Users'
Group, CA*
October issue, nibbles & bits
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Once upon a time there were only a few photographers in an entire city. Today, thanks to advances in digital photography, there are only a few people in an entire city who are not photographers. When you factor in the internet; millions of photos fly around the world every second with the aid of numerous applications.

One of these applications that I personally like is called Flickr. Anyone with internet access can have a free Flickr account. A Flickr account is based on a thing called a "photostream." Photographs and short videos can be uploaded to this photostream which can be used like a personal photo album. The photos can be left in the order they are uploaded or they can be organized into sets like "Christmas 2010," "fireworks," "black sheep of the family," etc. These can be viewed and, if you like, downloaded or commented on by contacts, friends, and family members. Flickr allows you to place anybody in those categories and you can allow each category different access privileges to each individual photo graph.

You can join special interest groups like "Bugs" or "Macro Photography" or "San Francisco," etc. If you don't see a group you like, you can even start a group of your own. You can use all manner of search criteria to find photos in your photostream or elsewhere on Flickr.

When you log on to Flickr you are sent to a Home/Welcome page. This page gives you a quick summary of what has happened since your last log on. From this page you can monitor views of or comments others have left on your own photos; or you can take a quick look at the new things from your contacts, friends, family members, or groups. You can also upload new photos to your own photostream or organize other aspects of your account.

Flickr can be a little overwhelming at first but you will soon learn your way around. Flickr honors copyrights, doesn't sell your information, lets you control access to your photos, and offers many other security features. Many people like the free accounts. Many more like the extra benefits of the pro account for about $25 per year.
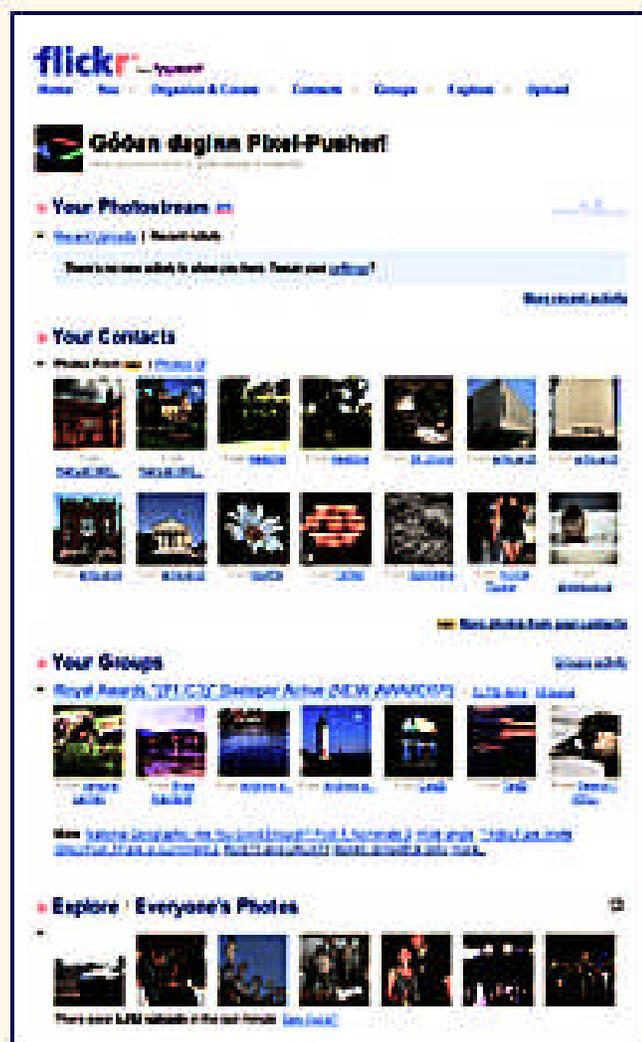
Flickr's Home/Welcome page

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FILE NAME EXTENSIONS-WHY THEY ARE IMPORTANT

FILE NAME EXTENSION
WHY THEY ARE IMPORTANT
By Penny Cano, member, Cajun Clickers Computer Club, LA
November 2011 issue, Computer News
www.clickers.org
ccnewsletter (at) cox.net

From the time of DOS through Windows XP, a file extension was a "dot" followed by three characters at the end of the file's name - .JPG, .DOC, and .PDF to name a few common ones. With Vista and Windows 7, the file extension is no longer limited to three characters but is still preceded by a "dot" (.DOCX and .CONTACT for example).

Windows has an association between the extension and the program needed to open the file. If you try to open a file with the wrong program you may see something like this:

I tried to open a picture (.JPG) file with Microsoft WORD. Does this look familiar? WORD doesn't understand the contents of the picture file, so it shows what it "thinks" it should look like. Wrong! So file name extensions are pretty important! The first question I ask when someone tells me they can't open a file is, "What is the extension on the file's name?"

Maybe you've never noticed extensions before. That is no surprise because the Windows default setting is to hide them. The first step in dealing with file ex

tensions is to be able to SEE them. From the START menu, choose Control Panel the Folder Options and on the View tab uncheck the box that says "Hide extensions for known file types." Apply the choice, then "Apply to all Folders." See picture on top of opposite column. The example is from Windows 7, but it is in the same place in all versions of Windows. Once you can see the extensions you can begin to learn what program is needed for each type of file.

If you insert a CD, DVD, or flash drive into the computer, you will probably get something like this if AUTOPLAY is turned on:

FILE NAME EXTENSIONS-WHY THEY ARE IMPORTANT

Windows is offering a list of programs it "thinks" is appropriate or at least a possibility. If you want to deal with pictures, your choice might be "Import pictures and videos" or "Import and View Your Photos." If you have music on the device you might choose "Play." If you just want to see what's there, you might choose "Open folder to view files." Under each choice is the name of the program Windows will use to deal with the files. I have several types of files on this flash   drive, so one program   may   not   be appropriate for all of them. If you don't actively make the choice, Windows will choose for you and use its default (whatever is highlighted) and you may get a big surprise!

Suppose you double-click on a file and the program that comes up is not the one you want to use? Many programs you install decide to change Windows default and make themselves the "program of choice" (but maybe not YOUR choice). Or maybe you want to use a different program on a one-time basis. You can choose another program by highlighting the file (one LEFT click) then right-click on it and choose "Open with."

and you can choose the one you want. If you want to try different programs, use this option until you decide which one you want. This will not set the default; it is simply for the one occasion. If I were to double-click on the picture in the upper left corner, Windows would use Windows Photo Viewer to open it because that is the current (default) association between a .JPG file and a program on my computer.

If you want to change the primary (default) program for all cases, you can make the choice yourself by clicking on "Choose default program" (or "Choose program" in XP). The resulting "Open with" box has the file's name at the top.

Notice the extension in .jpg in this case. Highlight the program you want to be the default, check the box that says "Always use the selected program to open this kind of file" and hit OK.

For those of you who feel brave, the "master list" of file extensions and their associated program can be found in the Control Panel. In XP it's under Folder Options on the File Types tab. In Vista and Win 7, it can be found under Default Programs and "Associate a file type with a program."
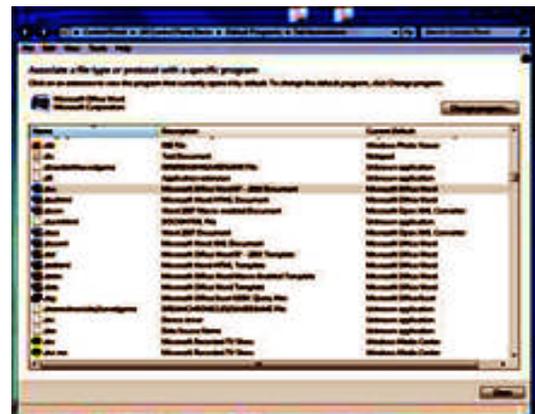
Write down the original setting BEFORE you change it and BE CAREFUL! If you set the wrong default you may get the first example above all the time.

STREAMING VIDEO PRESENTATION

STREAMING VIDEO PRESENTATION
by Mike Kaltschnee
Meeting review by Richard Corzo, President, Danbury
Computer Society, CT
November 2011 issue, DACS.org
www.dacs.org
dacsprez (at) dacs.org

Perhaps you've heard of people "cutting the cord," getting rid of their cable or satellite TV subscription, and relying on the Internet to watch television pro-gramming. Maybe
You just want to catch up on episodes that you may have missed, or be able to watch
Movies that aren't available from your cable or satel-lite provider.

Mike Kaltschnee explained the options, both services and devices you can hook up
to your TV. He is well known for his web site www.HackingNetflix.com. So of course
he mentioned Netflix, which has both a video streaming service and DVD rental by-mail
service. The streaming service seems to be available on every TV, Blu-ray player, and game console; along with all the streaming devices he showed us, and a Windows PC or Mac.

Hulu and Hulu Plus is another service featuring mostly TV programs, and come in both free and paid versions. Amazon offers streaming through its Ama-zon Prime offering, as well as a huge selection of video on demand titles. HBO Go is available only to HBO
cable subscribers, but lets you watch shows on port-able devices and selected set-top boxes.

Blockbuster is similar to Netflix in offering both streaming and DVDs by mail. However,
the streaming option for now requires a Dish satellite subscription. You can select from the various options based on the service's selection of titles, price, how often you watch, and what devices they support.

To find where particular titles may be offered, Mike mentioned TV Guide (http://www.tvguide.com/), Fanhattan (http://www.fanhattan.com/) which has an iPad
application and will soon offer a website guide, and clicker (http://www.clicker.com),
the "Internet Television Guide."

To watch Internet TV on your television, you could hook up your Windows PC or Mac with an HDMI or VGA cable, or use your game console. Your TV itself or Blu-ray player may offer some of these services.

You might also want to watch TV on your portable devices, phone, iPad, etc.

Finally, there are dedicated streaming boxes such as the Roku, Boxee, Apple TV
and Google TV. A TiVo combines a DVR with an of-fering of Netflix, Hulu Plus,
Amazon Video on Demand, and Blockbuster.

The Sony Dash was an interesting device I wasn't familiar with, and has a built-in screen. So there are a lot of options, and we're no longer limited to cable or satellite
TV.

DISKEEPER 2011

Diskeeper 2011
By George Harding, Treasurer, Tucson Computer Society, AZ
November 2011 issue, eJournal
www.aztcs.org
georgehardingsbd (at) earthlink.net

One of the essential parts of your computer, the hard disk, is also one that can cause the computer to be unable to boot. The Windows operating system provides tools to keep your hard disk in good health. Fragmentation of files is one of the consequences of efficient space utilization. File deletion leaves portions of disk space available for use
by another file, but only if the new file is the same or smaller size as the deleted file. If
larger, a portion of the new file is stored in the deleted file's space, the balance somewhere else. This splitting of a file may result in a file being cut into several pieces. It takes longer to retrieve a file in this condition, than if it is stored as one contiguous piece.

Fragmentation can be reduced or eliminated by a special program that rearranges files so that each occupies only one spot on the disk. This produces more efficient file retrieval. The defragmenter in Windows can be operated whenever desired. In Windows 7, it is run every day at a specified time that can be changed by the operator. In earlier versions of Windows, though, the defragmenter must be run manually, requiring you to remember to do so.

Diskeeper uses a different approach. Its IntelliWrite feature prevents fragmentation before it occurs. When a file is saved, this technology prevents fragmentation from occurring. In the rare event that a file is fragmented, the Instant Defrag feature fixes it in the background. These operations occur without any noticeable degradation of performance. Boot-time defragmentation is a feature that can be used to defrag those
files that are being used by Windows and cannot be changed while Windows is running. Instead, they are operated on before Windows starts. This may add a bit to start-up time.

You can, if you wish, manually defragment your disk, but Diskeeper does a more efficient job, so let it do its job.

Sold in different editions with prices to match, the lowest price is about $40, certainly reasonable for such a sophisticated program.

About: Diskeeper 2011
Vendor: Diskeeper
www.diskeeper.com
Price: $40 and up
Requires: Works with WIN XP/Vista/7

DECEMBER MEETING NOTICE

IT'S OUR ANNUAL HOLIDAY PARTY

This year it's a Cooperative Venture
If you have a new Electronic Gadget bring it for
A Show and Tell Segment
For Food and Drink
Members are asked to bring something
For Example
A variety of Cheeses or Meat Cubes or Crackers or Soda

USB 3.0—THE SUPER-SPEED BUS

USB 3-0 —- THE SUPER-SPEED BUS
By Andrew Petrovic, Ottawa PC Users' Group, Inc., Canada
February 2011 issue, PC News
http://opcug.ca/public/index.htm
opcug-webmaster (at) opcug.ca

I thought that it would be a good idea to introduce to you a new and upcoming development - the USB (Universal Serial Bus) version 3.0, as this technology will become mainstream in a fairly short time.

USB version 1.0 was created in 1996, but was more widely available in 1998 as version 1.1, superseded by version 2.0 in 2000. Over the next few years this will be replaced by version 3.0, already released and now being used by some consumers.

A quick overview of USB
The reason that USB was created all those years ago was in order to provide an interface for computers and peripheral devices that was easy to set up and use, as well as being low-priced. Actually, the USB data protocols used are very complex, but fortunately the USB controller chips take care of these details, so users don't have to be concerned. USB is designed to be 'Plug and Play' without the user having to set up parameters such as interrupt requests, addressing, etc. as well as not having to reboot the computer after adding a peripheral.

In USB versions up to 2.0 there are only four wires that are connected: power; ground; data - and data +.

This is the 'A'-type connector usually found on a computer interface or hub:

```
 |_____|
 | 1  2  3  4 |
  -----------
```
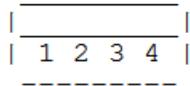
This is the 'B'-type connector often found on the USB peripheral:

```
 | 2  1 |
 | === |
 | 3  4 |
  -----
```
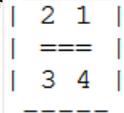
There are various other 'mini' and 'micro' connector types as well.

When we talk about USB components, we call a peripheral that plugs in to a computer port a 'device' and the port and controller associated with the port on the computer is called the 'host'.

Each device has a 'descriptor'. When a device is connected to a computer, the descriptor tells the host what kind of peripheral it is. From the product IDs it provides, the computer then knows what type of driver to load for that device. A driver is a small piece of software that interfaces between a hardware device and the operating system.

Other information passed to the computer includes the device's power requirements; protocol settings; etc. When a USB device is unplugged, the host instructs the operating system to unload the driver for that device.

As far as the user is concerned, the most important element of the upgrades to the USB technology is the increasing speed of data transfer. The following table shows the differences in data transfer speed between the versions. The theoretical speed quoted by manufacturers would, in reality, not be possible to achieve and is based upon operations that include extra packet transfer overheads, as well as a few other things. The real life actual maximum speed is likely to be between 30% and 60% of the quoted theoretical speed.

Version 1.1 had two speeds, 'Low' and 'Full'. Version 2.0 just bettered the 1.1 version 'Full' speed.

USB Version	Designation	Theoretical maximum speed
1.0	"Low speed"	1.5 Mbps = 190 KBps
1.1	"Full speed"	12 Mbps = 1.5 MBps
2.0	"High speed"	480 Mbps = 60 MBps
3.0	"Super speed"	4.8 Gbps = 600 MBps

Note the difference between Mbps (Megabits per second) and MBps (Megabytes per second). There are 8 bits in one byte, so when comparing speeds take note of which terminology you are using.

Limitations of USB 2.0
So if USB 3.0 is appearing on the market, it must be because previous versions are not able to do the job. Well, this is partly true. Version 2.0 will be able to be used for quite a lot of devices for a while, but as peripherals get faster and require faster interfaces, so USB 3.0 will become more desirable to end users. The sort of devices that are likely to require the faster data transfer speeds are external USB disk drives and components that deal with video.

It's not just speed that is a limit. Each USB 2.0 host port can provide up to 1/2 Amp (500 mA) of current to power a device that does not have its own addi-

USB 3.0—THE SUPER-SPEED BUS

tional power supply. Often this is simply not enough. Some external disk drives may require up to 900 mA of startup current and that is why they are often supplied with a 'Y' cable that plugs into two USB ports in order to feed enough power (for those portable drives that don't use an external power supply).

USB 2.0 data only moves unidirectionally. In other words, data can be sent to a device or from a device but not both at the same time. This cuts down the overall speed attainable.

Introducing USB 3.0
Whereas the upgrade from USB 1.1 to USB 2.0 used the same connectors with the same four wires, the upgrade from USB 2.0 to 3.0 is very much different.

Take the USB 2.0 configuration and add another entire set of connectors to it and call it 'Super speed'. This is how USB 3.0 has been created. The original USB 2.0 wires are still in place and the USB 3.0 adds five more wires (two pairs of data wires and a signal ground cable).

This is how the 'A'-type looks (Female - Receptacle), with pins 1 to 4 being identical to the original USB 2.0 specification:
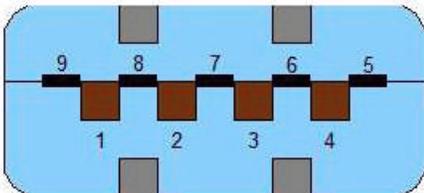
Cables and connectors are backwards compatible as well, so you can plug in a USB 2.0 device to a USB 3.0 port - you just won't get any extra speed advantages because only the USB 2.0 connectors will be used, though the power pins are the same so more available current should be available for USB 2.0 devices.

How is USB 3.0 better?
Apart from being fully compatible with previous USB versions, the faster data transfer is quite a dramatic improvement for USB 3.0 compatible devices because of a faster clock control speed; the use of asynchronous signaling for simultaneous sending and receiving; and an interrupt mechanism that does not use the time-consuming polling that USB 2.0 used.

One area where USB 3.0 may fall down is with the length of the cable that can be used. It could be limited to 3 meters if high throughput devices are used, as compared to the 5 meter cables possible with USB 2.0.

The limitation could be overcome using USB hubs or extenders and perhaps fiber-optic cabling might be possible in the future.

Is it worth upgrading?

USB 2.0 will likely be around for the next few years anyway, but in time newer computer motherboards will provide USB 3.0 ports as standard.

If you want to try out the technology now, there are add-on adapters available that plug in to a spare PCI-Express slot on your PC and provide two or more USB ports. There are also a few USB 3.0 external disk drives available, as well as hard drive enclosures with USB 3.0 interfaces where you can put in your own internal drive.

If you only have slow devices on your USB connections, it's no great advantage to upgrade. For example, keyboards and mice only require the slowest USB version and will not work any better on faster USB ports.

If you must have the faster transfer speeds for storage or video devices, then you should consider some form of upgrade. There are alternate interface types, such as eSATA and FireWire, but they are a less common interface type than USB and they also require a separate power line, as well as not always being 'hot-swappable'.

Other things that will benefit from the USB 3.0 interfaces are card readers and connections from digital cameras, when transferring pictures to the PC, though not when you plug in the current 'slower' devices. USB 3.0 thumb drives will be faster on a USB 3.0 interface but the current USB 2.0 thumb drives will be no faster on a USB 3.0 port. Interestingly enough, USB 3.0 thumb drives will be faster on existing USB 2.0 ports because the whole USB 3.0 flash drives had to be redesigned with faster chip access in order to take advantage of the USB 3.0 port speed.

Later versions of Windows and Linux should natively support USB 3.0 at some point. Windows XP will not, but USB interface and peripheral manufacturers should be able to supply suitable drivers for XP systems.

Short Circuits...zzzt!

For the Dough. Police in Hyannis, Mass. say a trio of masked and armed men in Cape Cod thought they were nabbing a bag of dough. They did - just not the kind they wanted. Three men are facing charges of armed robbery while masked after police say they robbed a Dunkin' Donuts with knives and a hatchet and only ended up with a bag of doughnuts. The men demanded a paper bag that was in one of the worker's purses, mistakenly believing she was carrying cash from the day's receipts. But police say the men never looked inside. The men were captured on video and were tracked down and arrested. *Associated Press* Jun. 11, 2011

For the Birds. Police in Everett, Washington have found themselves in a flap with some unusual suspects: an angry flock of birds. Crows have been attacking police in the parking lot of a precinct station. They've been swooping down and dive-bombing the officers as they walk to and from their cars. One officer used his siren to try to scare away the crows, but it didn't work. The birds responded by decorating his car with droppings. And they hold grudges. They may be keying in on police officers because they're all wearing the same kind of uniform. Until the hatching season is over, city employees will use umbrellas. *Associated Press* Jun. 11, 2011

"There was life before video games?"

For a Pizza. While phoning in an order for pizza, a caller in Palm Springs heard a robbery taking place. The caller notified the police, and the call was verified by a second caller who was in the diner, hidden behind a booth. The robber told the other patrons to hold their hands up, but he took money only from the cash register. Eye witnesses said that the perpetrator seem confident and comfortable, wishing everyone a "nice day" when he left. *Palm Desert Sun,* Feb. 2, 2011

For a Tip? Police in Atlanta say a cellphone deflected a bullet fired at a night club employee after two men were ejected from the club. A parking attendant at a club called Halo was struck in the chest when shots were fired. The officers said that the attendant had a cellphone in his jacket pocket, and the shot hit the phone before it ricocheted off his chest. Two people were arrested a short time later, and two handguns were recovered from their vehicle. The attendant suffered minor injuries. *Associated Press* Jan. 6, 2011

"The girl in front of me was texting through the whole movie. Her drama was much better than anything on screen!"

These Items are based on articles from the noted sources and have been adapted by the Editor.

HOW TO GET THERE
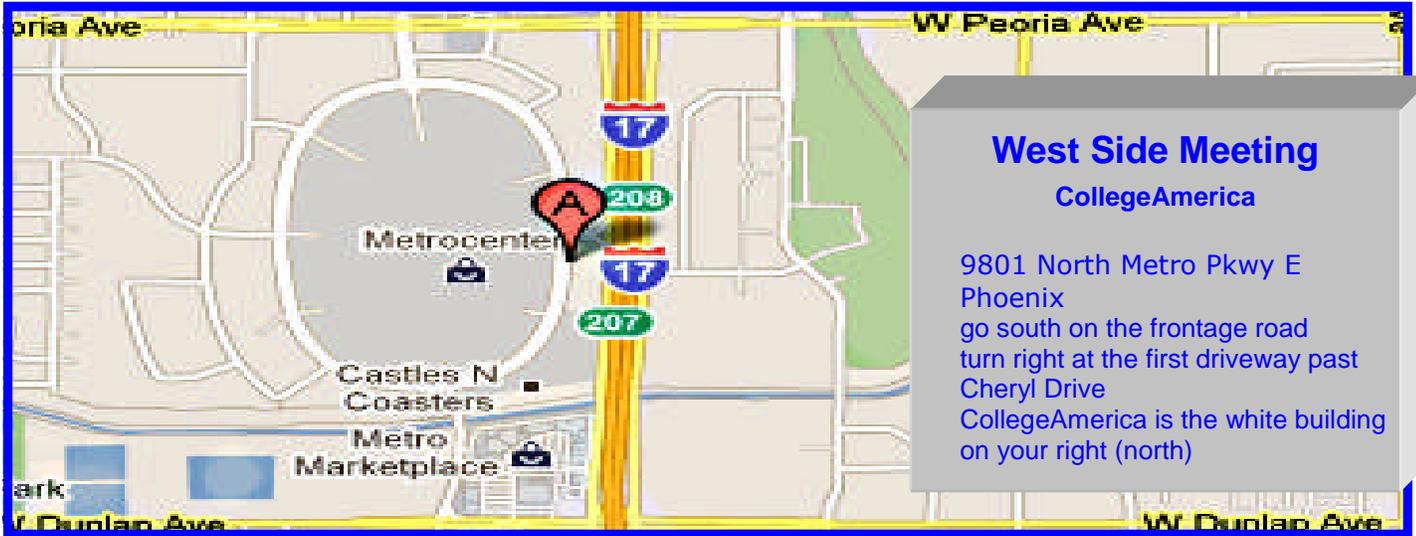
West Side Meeting

CollegeAmerica

9801 North Metro Pkwy E
Phoenix
go south on the frontage road
turn right at the first driveway past
Cheryl Drive
CollegeAmerica is the white building
on your right (north)
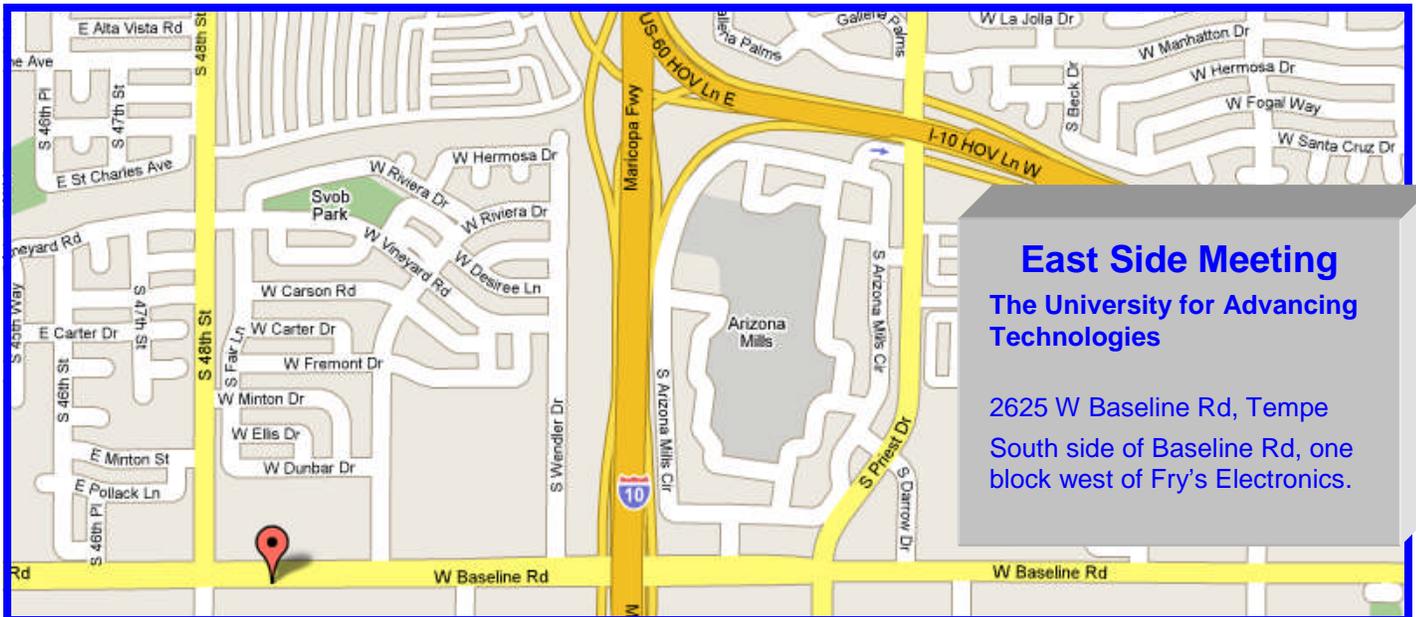
East Side Meeting

The University for Advancing Technologies

2625 W Baseline Rd, Tempe

South side of Baseline Rd, one block west of Fry's Electronics.
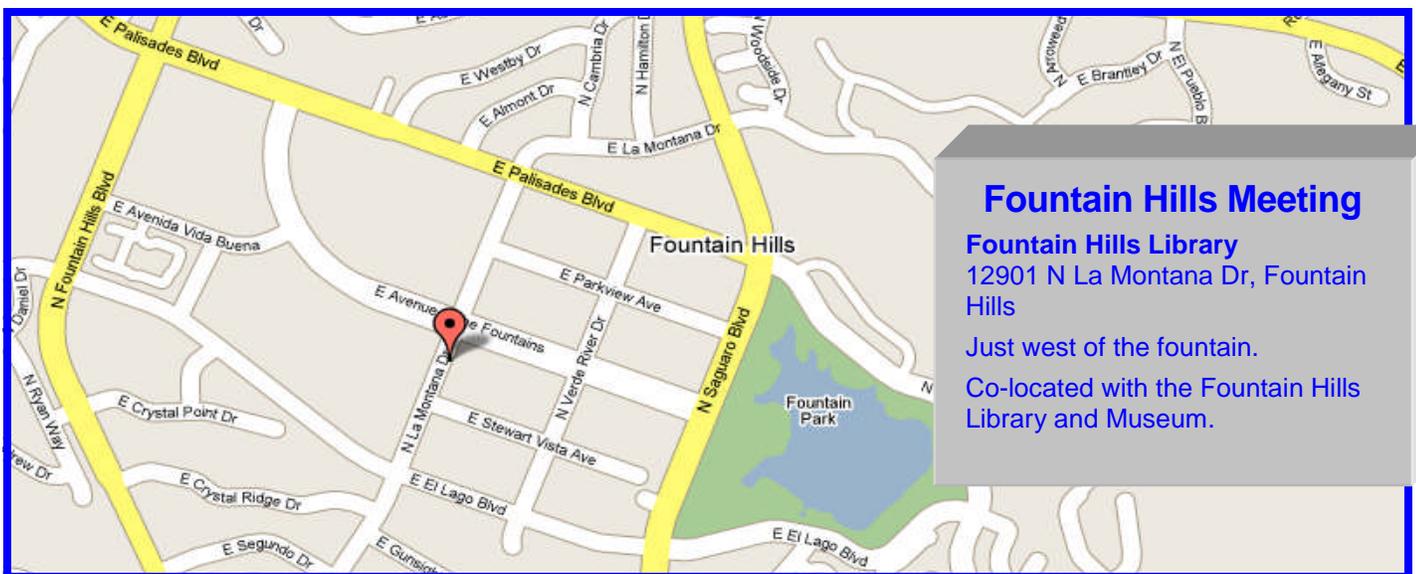
Fountain Hills Meeting

Fountain Hills Library
12901 N La Montana Dr, Fountain Hills

Just west of the fountain.

Co-located with the Fountain Hills Library and Museum.

MEMBERSHIP DUES

The Official Policy of the Phoenix PC Users Group is that we do not condone software piracy in any form.

DUES $36
THROUGH
DEC 31, 2012

Phoenix PC Users Group Membership Application

First: (Print Legibly) _____Initial: ___Last:_____

Address: _____

City, State: _____ Zip Code:_____

Home Phone: _____ Work Phone: _____ Ext: _____
Please note: We DO-NOT share phone numbers outside the club, and will generally only use your phone information, if we cannot contact you in timely fashion, via e-mail, or the club web-site

Receive Electronic newsletter in place of printed one: ☐ Yes   ☐ No

E-mail address: _____(Print Legibly)

Signature _____Date___/___/___

Release my address to vendors ?   ☐ Yes ☐ No Note: Phone numbers **will not** be listed.

May the club share your e-mail address
with other members only?   ☐ Yes   ☐ No
With club approved vendors?   ☐ Yes   ☐ No
Please do not share my e-mail address   ☐

Mail this completed form with payment to:

Phoenix PC Users Group
PO Box 7127
Phoenix, AZ 85011-7127

Web address:
phoenixpcug.org

December 2011

The Newsletter of the Phoenix Personal Computer Users Group
"Users helping users to understand computers"