PPCUG *NEWS*

A PUBLICATION OF THE PRINCETON PC USERS GROUP

Finding Useful Free Software on the Internet: Some of My Favorites
Vic Laurie
Monday, May 9, 2005

Many free programs in a variety of categories are available on the Internet. They range from the very useful to the dangerous. How to find the good ones will be discussed and some examples of the speaker's personal favorites will be shown.

Vic Laurie received a Ph.D. in Physical Chemistry from Harvard University. He then joined the Chemistry Faculty, first at Stanford University, and subsequently at Princeton University. He began using computers as a research tool in 1956 and has been using them for a variety of purposes ever since. Now retired, he lectures frequently on computer topics and is especially interested in encouraging Senior Citizens to use computers.

For more info, see Vic Laurie's website.

Lawrence Library
Meeting Rooms 1 & 2
US Alternate Route 1 South & Darrah Lane, Lawrenceville, NJ

In this issue:

Coming Events:

June 13 —Doug Dixon on TV in Your Pocket: Portable Media Players and Phones
July 11 —Jen Clausen from Smart Computing
August 8 —Sol Libes on Creating an Animated Slide Show
September 12—TBA
October 17—TBA

Minutes of the April Meeting

Clarke started the meeting at 7:30 p.m.

Paul K. gave an update on the preparations for the Parcel Pickup at the TCF'2005 being held at The College of New Jersey.

Q: Can I defrag a disk even if I have little free disk space?
A: Yes. It will take longer. Consider deleting "temp" files and cleaning out the "Recycled" folder.

Q: After installing Comcast I am unable to use AOL version 9 to dial out?
A: With a high speed connection you do not need to dial out. You may need to create another connection profile. AOL customer service should be able to help you with this.

Q: Can I upgrade AOL from version 7 to version 9?
A: We believe so.

Joe Budelis gave a presentation on VoIP (Voice over Internet Protocol). Joe gave an overview of VoIP and a history of its development. He then gave some pros and cons and ended with a comparison of several services. The comparison can be found at: http://shopforld.com/VoIP.xls. Joe's slides are available at: VoIP for Dummies.

- Submitted by Clarke Walker

Joe B. and Kim G. by Clarke Walker

Parcel Pickup volunteers

Parcel Pickup at TCF'05 by Clarke Walker

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President's Message

Another change to the newsletter this month. I have changed the layout to one column. Two columns (newspaper style) is easier to read when printed. But is hard to read when displayed on the computer.   Let me know what you think?

I want to thank everyone who helped out at the TCF Parcel Pickup. Because of them we raised some money for the club.

Probably because of the closeness of parking to the flea market area our services were not used nearly as much as in prior years.

The TCF was a good one, especially the seminars and talks. And you can not fault the nearby location.

- Clarke Walker

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Configuring the DNS Resolver Cache in Windows XP

by Vic Laurie, PPCUG
Member of the Princeton PC User Group

To help speed up Web browsing, Windows XP comes with a local cache containing any DNS addresses that have been looked up recently. (For more detail on how Internet addresses work, see the article at http://www.vlaurie.com/computers2/Articles/Name.htm.) Once an URL has been resolved by an Internet name server into a numerical IP, the information is stored locally. Anytime your browser requests an URL, Windows XP first looks in the local cache to see if it is there before querying the external name server used by your ISP. If it finds the resolved URL locally it uses that IP. This is supposed to save time and cut down on Web traffic.

Problems

The default time period for keeping an address in the cache is 24 hours. Thus, a problem can arise if the IP for an URL changes before the 24 hour period is up. In this case an error message will result if you try to connect to the URL. It is not a frequent occurrence but is not unknown. Another problem can arise from URLs that are temporarily busy or from congested Internet traffic. If a negative response is received from an attempt to connect, that result is also kept in the local cache. The default time period for retaining a negative response is five minutes. In other words, once a negative response is received you will not be able to connect to the site for at least five more minutes. Since temporary congestion lasting a few seconds is often the cause of a momentary inability to connect to a site, this delay of five minutes can be a nuisance.

Clear the DNS resolver cache

Fortunately, it is possible to clear out the local DNS cache in order to get around these types of problems. A previous article (http://www.vlaurie.com/computers2/Articles/tcpiputil.htm) discussed the useful command-line utility, *ipconfig*. This tool has a switch, *flushdns*, for removing the entries in the cache. (See http://www.vlaurie.com/computers2/Articles/command.htm and http://www.vlaurie.com/computers2/Articles/command2.htm for more on the command-line.) Open a command prompt and enter "ipconfig /flushdns" (without quotes) and the cache will be emptied. Personally, I find that it some-

times speeds up Internet browsing to do this flush even when there are no obvious error messages. If you are curious about the contents of the DNS cache, they can also be seen by using *ipconfig*. In this case open a command prompt and enter "ipconfig /displaydns". If you are experiencing trouble connecting to a particular Web site, it may be useful to see if its URL is in the cache and what IP is being used.

Configure the DNS resolver cache

A way to minimize problems from the long default wait times that are used for holding data in the DNS cache is to reduce the times (known as Time to Live or TTL). *This requires a Registry edit so should be done only by those who know how to restore their Registry*. The Registry key that is involved is

 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\DNSCache\Parameters

The binary entry **MaxCacheEntryTtlLimit** can be used to control how long positive responses are kept. Values are in seconds and the default value in the absence of an entry (the usual case) is 86,400 seconds or one day. If you wish to shorten the TTL, create the entry and enter your preferred time in seconds. Most PC users will probably not gain much this way, however.

Negative responses are another story. I often encounter Web sites that do not respond immediately but which are available after a short wait and a retry. A wait of five minutes would be neither convenient nor necessary. I see no reason to store negative responses in the DNS cache and I have tweaked my own Registry to prevent them from being entered. In this case create a binary entry for the above Registry key and name it **NegativeCacheTime. S**et the value to "0" (zero). If you prefer to keep the negative responses, but with a shorter TTL, enter the appropriate number of seconds. The default TTL is 300 seconds.

Defend against responses from non-queried servers

If its settings are left alone, the DNS cache will also accept responses from servers that it never queried. In other words, Web sites that you never tried to reach could send a message looking like a response and it would be stored in the cache. This is a security hole that might allow unauthorized DNS servers to send invalid information for the purpose of misdirecting subsequent DNS queries.

Again a Registry edit is called for. To disable responses from sites that you never asked for, create a DWORD entry named **QueryIpMatching**. Put it in the same Registry key given above and give it a value of 1.

More Information

Microsoft documentation on DNS caching can be found at http://tinyurl.com/ypw62.

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Link of the Month

To learn about and keep track of Linux distributions you can go to: http://distrowatch.com/

Have you discovered a useful link? Then share it with the members of the P PC UG.

VoIP (Voice over Internet Protocol)

By Brian K. Lewis, Ph.D.
Member of the Sarasota Personal Computer Users Group, Inc.
www.spcug.org

Are you using the Internet for your local and/or long distance service? If not, then maybe you need to read this article to find out how some computer users are saving "mucho dinero" on their telephone calls.

VoIP stands for Voice over Internet Protocol. There are ways to use the Internet for free phone calls, low cost phone calls (2¢ per minute) or a monthly fixed rate for both local and long-distance calls. So how is it possible to transmit your voice over your Internet connection? We'll look at some of the technical aspects first. Then I can discuss some of the services that are available for you to check out further.

When you use your telephone your voice is converted into electrical impulses and transmitted over copper wires to another phone. There it is converted back to sound waves. These impulses are transmitted via several switches in the telephone network. This system is referred to as the Public Switched Telephone Network (PSTN). As long as you are talking on the phone you have a constant circuit connection between the two phones. In the original PSTN system, all calls required a dedicated wire for each call. For the period of time you were on the phone you "owned" a copper wire connection between your phone and the other party. In today's PSTN, all calls are digitized and can be combined with thousands of others running over fiber optic cable between central stations. However, the connection between the two phones must remain open for the length of the call.

When computer data is transmitted over phone lines or cable, it is also in digital form. However, the data is sent in packets and does not require a dedicated pathway to reach its destination. In fact, when a computer sends a stream of data packets, they may all arrive at their destination after traveling different routes. There are thousands of possible paths between any origin and any destination. In addition, packets from other origins can use any time spaces between your packets. This is a more efficient system, as a circuit does not need to be kept open. This system is referred to as packet switching.

So if your e-mail is being chopped up into small packets, how does the system know what to do with them? Each packet contains an address that tells the router what its final destination is. The sending computer sends the packet off to a router and then goes on to its next operation. The router selects a path to another router and sends the packet off. This process continues to the destination computer. At the destination, the receiving computer assembles the packets based on the information contained in each packet.

So what does this have to do with Internet phones? Very simple. VoIP uses the packet switching technology to transmit your call. The digitization of your voice occurs either through your sound card or a device known as an analog telephone adapter (ATA). There are also Internet phones which connect directly to a network router and handle the conversion process. The voice packets that result from these various adapters are routed over the Internet in the same way as data packets. When you make a phone call, there is always dead space when no one is talking. With the packet system, other data packets from other sources are being transmitted over the Internet making maximum use of its capacity.

In the early days of VoIP sound quality was poor and the method of operation more like using a walkie-talkie. Today's equipment is vastly improved. Sound quality on many VoIP systems is the equivalent of that found in the PSTN. Depending on the system you are using, you can dial any number and your call will be routed over the Internet. In such a system, you and the party you called won't see any difference in operation or sound from that of the PSTN.

So why would you be interested in using an Internet phone instead of your current local/long distance PSTN service? One big factor for many people is cost. The cost of Internet service ranges from free to $25/month (more in some cases) for unlimited calls. In addition, many of the VoIP services offer features that cost you extra through your local phone company. It is not unusual for a VoIP provider to include Caller ID, Call waiting, Call transfer, call forwarding, voicemail and three way calling as part of the basic price.

Now let's look at some of the providers and their services. Skype (www.skype.com) offers a free service that allows you to connect to other Skype users. The software for this can be downloaded from their website. It took just a few minutes to install it on my computer. Once you have installed it, you need to setup a call list of other users. So you have to contact people that you call frequently and have them install the Skype software. From that point on, it becomes much like instant messaging. If the person you are calling is on-line, you can connect and talk to them. Otherwise, they have no way to know that you are calling. The reverse is also true if they want to call you. The minimum hardware you need for this are speakers connected to your sound card and a microphone. You can also use a headset with a built-in microphone. It is also advisable that you have a broadband connection, either cable or DSL. In my testing of it, once I had a connection, the call was quite clear with no background static or other problems.

So what do you do if you have Skype and want to call someone who doesn't have Skype? You can get SkypeOut that allows you to call any phone number anywhere in the world for about 2¢/minute. After you install the SkypeOut software you buy credit on their Internet site which you can then use for your calls. Some reviewers have had sound problems with SkypeOut. I have not tested it.

There are other free services available as well. One is Free World Dialup ([www.freeworldialup.com)](www.freeworldialup.com). This is a quote from their website: "FWD allows you to make free phone calls using any broadband connection using devices that follow Internet standards. This can be a 'regular' telephone connected to a packetizer, an IP Phone or any number of free soft-phones (software for your PC or PDA)." In order to use the system you need to download and install the software. Then you obtain a phone number from FWD. The hardware you need is a SIP compatible ATA adapter that you connect to a network router that connects to your modem. You can then connect any telephone to the jack in the ATA adapter. Now you're ready to dial any FWD user anywhere in the world. However, you can not dial a regular PSTN phone from this system without purchasing time from another VoIP provider. The advantage of FWD over Skype is that your computer doesn't have to be on to receive calls. Your phone will ring just as it did when connected to the PSTN phone system.

There is another advantage to FWD. This system uses the Session Initiation Protocol (SIP) standard. This allows FWD users to call others who are not member of FWD but are connected by a different SIP compatible service. Other free services currently using the SIP standard are IPTEL.org and SIP-Phone.com. Skype does not adhere to the SIP standard.

Now we get to the services that charge a monthly fee. These providers furnish a SIP compatible ATA adapter and in some instances the router for your telephone connection. This list includes companies like

AT&T (CallVantage), Verizon (VoiceWing), Packet8, VoicePulse and Vonage. Of these, AT&T and Verizon are the most expensive. Several of these providers are preparing wireless units that will allow you to connect through any WiFi hotspot. Vonage has announced that they expect to have a wireless unit available by mid-summer 2005. That means you could make and receive call while you are on the road. Also, by taking your ATA adapter with you when you travel, connections can be made through broadband data ports in many hotels and motels.

Of these providers, Vonage has been in the game longer than the others and has a strong reputation as to its quality. They have two basic plans: (1) $24.99 for unlimited calling in the U.S. and Canada, (2) $14.99 for 500 long-distance minutes. They also offer virtual phone numbers with any area code you prefer. Dialing other numbers in your area code requires just seven digits. You can add a fax line for $10 per month or toll-free numbers for $5 per month. With Vonage and these other providers, you can call any PSTN number or numbers on the FWD network. For more details on the specific services provided by these companies I would suggest you check their web sites.

So what are the drawbacks to VoIP services? First, if your Internet provider has a service outage, then your phone service is also down. Second, if there is a power outage you lose your phone service unless your system has a battery backup to keep it running. Another disadvantage is that most of these services can't connect to 911. In some cases, you can call 911 after you have provided the service with location information for their files. They need this information so the system will know where to direct the call. However, the 911 operator can't see your name or address and you have to provide that information when you make the call.

In spite of these disadvantages, VoIP usage is rapidly increasing. If you are interested in testing VoIP, I suggest you start with one of the free services. Try it, you may like it.

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RSS Feeds

By Greg Lenihan
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http://ppcompas.apcug.org/

I believe I am an information junkie. I get more e-mail and subscribe to more newsletters than I can read. And yet I'm still searching for more. A few months ago, around the time of the presidential election, I discovered the world of Blogs (or Weblogs). These are online journals where authors post opinions and commentary and often link to the articles they are discussing. These often track back to more Blogs, and more authors worth reading, and before you know it, you can spend a good deal more time than you can afford searching for obscure opinions and facts.

After collecting a number of these sites as favorites in my browser, it became difficult to keep up with them every day. There are all kinds of subjects to choose from, but my favorites are news sites, political sites, and especially--technology sites. Most of these sites had or icons, which I knew had something to do with "feeds," so I decided to find out how to obtain the reader software necessary to subscribe to these feeds (or "channels").

RSS stands for Really Simple Syndication or Rich Site Summary. RSS is a text-based format (XML, actually) that contains various tagged items like a title, summary, and a link to a URL. Instead of you having to continually go from site to site to see if there have been updates posted, these sites are able to "feed" their updates to you. All you need is a news reader or what is called an RSS "aggregator." This is a program that collects and organizes these feeds periodically so you can read them when you want. Then you can subscribe to these sites and automatically get these new postings. It's like creating favorites or bookmarks, except you don't have to continually go there. They come to you.

I started by going to **http://reviews.cnet.com/4520-10088_7-5143460.html** to read reviews and to gather recommenda-

tions. I found more options and more reviews of readers at **http://email.about.com/cs/rssfeedreaders/tp/top_rss_windows.htm**. There are many different readers; some free, some not, with different goals. Some are standalone, others work with Internet Explorer, and one worked with Outlook. But the one that caught my eye was free and did not require a software installation. Bloglines (**http://www.bloglines.com**) is Web-based, which means I can access it from any computer with an Internet connection. I could be at home, at work, on the road, and I could still get my info fix.

The signup was quick at the Bloglines.com site. I was just asked for a username (e-mail address), password, time zone, and language. A confirmation message is then sent to your e-mail account. You simply click on a link they provide, and you're confirmed. In addition, the site posts the top Blogs people enjoy, and with the click of a button you can subscribe. Of course, you are not limited to their selections. Any Blog or site with an RSS feed can be added to your aggregator. That is how you can use those XLM icons. If you click on one you'll see a lot of tagged text, much like HTML. But it supplies the link that enables you to subscribe by pasting this link into your aggregator.

Once you have your aggregator and get it running, all that is left is to find sites or Blogs whose content you are interested in. The site where you obtain your aggregator will probably offer you a number to choose from. To get an idea of what is out there, go to **http://www.blogstreet.com/search.html** and see the number of topics to pick from. I frequently subscribe to something that looks interesting and if it is not what I expected, it only takes a matter of seconds to unsubscribe. But actually right now, I have more feeds than I have time to read.

All unattributed articles are solely the fault of the editor.

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