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# PPCUG NEWS

A PUBLICATION OF THE PRINCETON PC USERS GROUP

## TV in Your Pocket: Portable Media Players and Phones

Douglas Dixon

Monday, June 13, 2005

Can't get enough of your favorite music? Have precious photos and video clips that you can't leave behind? Enter today's disk-based portable media players, and even bulked-up mobile phones. You just need to figure out what you want

Doug Dixon will demonstrate a range of devices from tiny music players to cell phones to dedicated devices for TV and movies. It's BYOP -- bring your own favorite players to show off as well!

You can find out more about Doug on his webs site: <http://www.manifest-tech.com/>

Lawrence Library  
Meeting Rooms 1 & 2

US Alternate Route 1 South & Darrah Lane, Lawrenceville, NJ

*Meetings of an organization at any of the facilities of the Mercer County Library System  
in no way imply endorsement of its programs.*

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### Coming Events:

July 11 —Jen Clausen from Smart Computing  
August 8 —Sol Libes on Creating an Animated Slide  
Show  
September 12—Chris Jarocha-Ernst on Creating Web  
Pages with Netscape Composer  
October 17—TBA

## About PPCUG

### General Meetings

Second Monday of the month at the Lawrenceville Library, Alternate Route 1 and Darrah Lane.

7:00 PM: Social Time / Tech Corner

7:30 PM: Meeting comes to Order

7:45 PM: Featured presentation

For information about upcoming meetings or joining PPCUG, see:

<http://www.ppcug-nj.org>

or email us at:

[ppcug.nj@gmail.com](mailto:ppcug.nj@gmail.com)

(Please include "OK" in the subject line.)

### Board Meetings

Board meetings are open to all members. Notice of an upcoming meeting will be posted on the web site.

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### 2005 Annual Dues

Dues are \$40 per calendar year with a mailed newsletter or \$20 per year with online access to the newsletter. New members pay \$3.25 or \$1.75 per month times the number of months remaining in the current year.

## Minutes of the May Meeting

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

Clarke and Paul K. thanked everyone for their participation at the Parcel Pickup at the TCF'2005 that was held at The College of New Jersey. Turn out for TCF'2005 was lower than in previous years so less money was received as contributions.

Vic Laurie then took us on a trip on the Internet for free software. You can access his notes at: <http://www.vlaurie.com/computers2/Articles/free.htm>



Vic Laurie and Clarke Walker by Tom Carman



Club members by Clarke Walker



## President's Message

Several people commented that they like the new format of the newsletter so I'll continue to use it. It will also help when you read the article by Sol Libes. Sol bought a new 24" monitor and needed to use that increase display space, so he bought a TV tuner. Sol included some images of his screen with his article. (Too bad he didn't include a 24" screen.)

Vic Laurie besides treating us to some useful computer programs at the last meeting has submitted another article. This one is on Internet protocols you will find on your computer.

At the June meeting it is BYOP! Bring your own portable device to show other club members. Doug Dixon will show off some of his, including the new PSP, and moderate this session.

- Clarke Walker



## TCP/IP, POP, SMTP, HTTP, FTP and All That

*by Vic Laurie*  
Member of the Princeton PC User Group

In order for computers to communicate with one another, standard methods of information transfer and processing have been devised. These are referred to as "protocols" and some of the more common ones go by the acronyms TCP, IP, UDP, POP, SMTP, HTTP, and FTP. Since these terms are mentioned often and are likely to leave the average PC user wondering what the alphabet soup means, here is a brief survey of what it is all about.

When two humans converse, they may have to use the same language but they generally understand each other without having to adhere to rigid rules of grammar or formal language frameworks. Computers, on the other hand, have to have everything explicitly defined and structured. If computers wish to communicate with one another, they have to know in advance exactly how information is to be exchanged and precisely what the format will be. Therefore, standard methods of transmitting and processing various kinds of information are used and these methods are called "protocols". Protocols are established by international agreement and ensure that computers everywhere can talk to one another. There are a variety of protocols for different kinds of information and functions. This article will discuss some of the common protocols that the average PC user is likely to encounter.

### TCP/IP

TCP (Transmission Control Protocol) and IP (Internet Protocol) are two different procedures that are often linked together. The linking of several protocols is common since the functions of different protocols can be complementary so that together they carry out some complete task. The combination of several protocols to carry out a particular task is often called a "stack" because it has layers of operations. In fact, the term "TCP/IP" is normally used to refer to a whole suite of protocols, each with different functions. This suite of protocols is what carries out the basic operations of the Web. TCP/IP is also used on many local area networks. The details of how the Web works are beyond the scope of this article but I will briefly describe some of the basics of this very important group of protocols. More details can be found in the references at the end of this article. (Incidentally, one characteristic of AOL is that they do not use the standard TCP/IP. Thus their network is a sort of separate "gated" community.)

When information is sent over the Internet, it is generally broken up into smaller pieces or "packets". The use of packets facilitates speedy transmission since different parts of a message can be sent by different routes and then reassembled at the destination. It is also a safety measure to minimize the chances

of losing information in the transmission process. TCP is the means for creating the packets, putting them back together in the correct order at the end, and checking to make sure that no packets got lost in transmission. If necessary, TCP will request that a packet be resent.

Internet Protocol (IP) is the method used to route information to the proper address. (More on IP addresses at <http://www.vlaurie.com/computers2/Articles/Name.htm>.) Every computer on the Internet has to have its own unique address known as the IP address. Every packet sent will contain an IP address showing where it is supposed to go. A packet may go through a number of computer routers before arriving at its final destination and IP controls the process of getting everything to the designated computer. Note that IP does not make physical connections between computers but relies on TCP for this function. IP is also used in conjunction with other protocols that create connections.

Another member of the TCP/IP suite is User Datagram Protocol (UDP). (A datagram is almost the same as a packet except that sometimes a packet will contain more than one datagram.) This protocol is used together with IP when small amounts of information are involved. It is simpler than TCP and lacks the flow-control and error-recovery functions of TCP. Thus, it uses fewer system resources.

A different type of protocol is Internet Control Message Protocol (ICMP). It defines a small number of messages used for diagnostic and management purposes. It is also used by Ping and Traceroute. (These two tools were discussed in the February, 2005 newsletter.)

## **Mail protocols**

Email requires its own set of protocols and there are a variety, both for sending and for receiving mail. The most common protocol for sending mail is Simple Mail Transfer Protocol (SMTP). When configuring email clients such as Outlook Express, an Internet address for an SMTP server must be entered. The most common protocol for receiving mail is Post Office Protocol (POP). It is now in version 3 so it is called POP3. Email clients such as Outlook Express require an address for a POP3 server before they can read mail. The SMTP and POP3 servers may or may not be the same address. Both SMTP and POP3 use TCP for managing the transmission and delivery of mail across the Internet.

A more powerful but less common protocol for reading mail is Interactive Mail Access Protocol (IMAP). This protocol allows for the reading of individual mailboxes at a single account and is more common in business environments. IMAP also uses TCP to manage the actual transmission of mail.

It is increasingly popular to use Web based email such as Yahoo. Web mail, of course, involves the same protocol as a Web page and this is discussed next.

## **Hypertext Transfer Protocol**

Web pages are constructed according to a standard method called Hypertext Markup Language (HTML). An HTML page is transmitted over the Web in a standard way and format known as Hypertext Transfer Protocol (HTTP). This protocol uses TCP/IP to manage the Web transmission.

A related protocol is Hypertext Transfer Protocol over Secure Socket Layer (HTTPS), first introduced by Netscape. It provides for the transmission in encrypted form to provide security for sensitive data. A Web page using this protocol will have https: at the front of its URL.

## **File Transfer Protocol**

File Transfer Protocol (FTP) lives up to its name and provides a method for copying files over a network from one computer to another. More generally, it provides for some simple file management on the con-

tents of a remote computer. It is an old protocol and is used less than it was before the Word Wide Web came along. Today, its primary use is uploading files to a Web site. It can also be used for downloading from the Web but, more often than not, downloading is done via HTTP. Sites that have a lot of downloading (software sites, for example) will often have an FTP server to handle the traffic. If FTP is involved, the URL will have ftp: at the front.

## References

- TCP/IP FAQ- <http://www.itprc.com/tcpipfaq/default.htm>
- Internet protocol tutorial-<http://compnetworking.about.com/library/gateway/blip.htm>
- Overview of TCP/IP- <http://www.techsupportalert.com/c04100.htm>
- TCP/IP reference- [http://www.wordiq.com/definition/Internet\\_protocol\\_suite](http://www.wordiq.com/definition/Internet_protocol_suite)



## Link of the Month

Read about vintage computers at: <http://www.vintage.org/>

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



## Creating a Windows Media Center PC the Low-Cost Way

*by Sol Libes*

**Member of the Princeton PC User Group**

HP and a few other manufacturers are selling the “Windows Media Center PC.” The HP website states that with it “you can pause, play, and record live TV, plus make DVD movies, transfer VHS tapes to DVD, and edit video by adding music, photos, and special effects.”. A system, with TV tuner and remote control sells for about \$1200.

Since I already had a Windows XP system with DVD writer I decided to see if I could convert my system into a Media Center system. Fortunately, I found that I was able to do it for only \$43. Here is how I did it.

At the recent Trenton Computer Festival I purchased two PCI cards for my computer and installed software that is a free download from the Microsoft website. I purchased the following PCI cards. Firewire IEEE 1394A PCI card, \$12, and Wpert TV-PVR878 PCI card (\$31). More information at:

<http://www.kworld.com.tw/en/product/PVR-878/PVR-878.html>

The Firewire card provided 3 ports to which I could connect a digital camcorder and upload movie files to the computer. It also included a cable to connect to the camcorder and Ulead Video Studio video editing software.

The Wpert TV-PVR card provided several input functions:

- TV tuner (125 channels) that worked with either cable or antenna input

- Composite video input (e.g. from a VCR or analog camcorder)

- S-video input

- FM antenna input

The included software turned the PC into a PVR (Personal Video Recorder). I could watch TV, program timed TV record, time shift, and play recorded video. It could also functioned as an FM tuner. In addition, it included software to edit a video, burn a DVD, VCD, or SVCD disk, and encode and convert to mpeg 2/1 and AVI formats.

It also included a remote control unit that duplicated all on-screen functions

## Installation

The Firewire card did not work when first installed. Windows XP did not find the new hardware. I called the dealer and they recommended that I try installing it in my other PCI slot. When I did that Windows found the new hardware and installed a driver for it.

I then went to Radio Shack and bought a TV cable splitter and cable to divide my cable TV line and run a TV cable connection up to my computer. The TV-PVR card installed (in the slot that would not work with the Firewire card) without problems. Windows immediately recognized that new hardware was installed and asked that I run the CD that came with it to install the driver. The software to provide the PVR functions installed automatically. The unit came with a barebones instruction manual. This is only for someone who is technically knowledgeable. But at least it was a printed manual, far better than some expensive packages that now come only with a manual on a CD. I connected the audio output to the audio input on my computer and the TV cable to the card's TV input. I was then able to make the necessary settings. They are very similar to setting up a VCR.

Although I installed the cards on a Windows XP the manufacturer states that it will also work with Windows 2000/ME/98SE systems. They do specify that it requires a Pentium III 1G MMX, or above, a 16MB VGA card with 800x600 16-bit resolution.

For software, I downloaded the Windows Photo Story 3 from <http://www.Microsoft.com> and used the Windows Movie Maker program included with Windows XP. Refer to the December 2004 newsletter for my reviews of these programs. In addition, I downloaded Windows Media Encoder 9, which captures windows screen activity, as well as the latest version of Windows Media Player.

## Using the Media Center

I imported a video from a camcorder using Windows Movie Maker 2. However, I found that WMM2 had very limited control of the camcorder. It captured everything from the camcorder's tape. It would not allow me to capture only the movie clips I wanted and ignore the ones I did not want. Fortunately I had Roxio Easy Media Creator 7, which could import a video with full control over the camcorder allowing me to just capture the clips I wanted. Once I had the movie clips on the hard disk I switched back to using WMM2, which I found easier to use than the Roxio video editor.





## Conclusion

I now have all the same capabilities as the Windows Media system and all it cost was \$43.

I do have a few complaints. There are no instructions on how to use the remote control device. Secondly, there is no telephone number to call for help nor is there much in the way of support information on their website. And lastly, it does not work with <http://www.TitanTV.com> to schedule TV programming..

When my wife saw my PVR operate she said she also wanted to be able to watch and record TV on her computer. The Trenton Computer Festival had ended. However, CompUSA was having a sale on the Hauppauge WinTV-PVR-150 PCI card for \$70, after rebate. So I bought and installed it on her computer. This is a terrific unit and much better than my Asian \$31 unit. I found the Hauppauge software much easier to use than the Xpert software with a much better user on-screen interface. This was particularly important for my wife. The unit came with a much better printed manual and better support. It also works with <http://www.TitanTV.com> for programming. Further it included the Ulead Movie Factory video editor which is much better than the Xpert video editor and also provides better DVD burning functions. I think that the additional \$40 is well worth it. I am now thinking of switching to the Hauppauge unit.



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