

February 2007 Volume 23 Number 2

# PPCUG NEWS

A PUBLICATION OF THE PRINCETON PC USERS GROUP

## Hot New Tech: Digital Home & Mobility

Doug Dixon

Monday, February 5, 2007

Early each January, torrents of new products are introduced at the annual Consumer Electronics Show in Las Vegas. This year's CES had the largest exhibition ever -- some 2,700 exhibitors in 1.8 million square feet -- viewed by over 140,000 attendees. Doug Dixon will discuss the digital home -- widescreen high-definition TV, digital cameras and camcorders, plus connecting devices to share your music and videos wirelessly, from set-top to desktop to portable devices.

Douglas Dixon is an independent technology consultant, author, and speaker specializing in digital media. He makes his articles and technical references freely available on his Manifest Technology website ([www.manifest-tech.com](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 Schedule

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| March 12 .....         | Joe Perignat—Computer Security                                |
| April 9 .....          | Vic Laurie—Windows Vista Now or Later?                        |
| April 27, 28, 29, 2007 | Trenton Computer Festival at TCNJ                             |
| May 14, 2007 .....     | Gabe Goldberg—Association of Personal<br>Computer User Groups |
| June 11, 2007 .....    | Dave Brody—Astronomy: Explore Space on<br>Your PC             |

## 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.

### Board Members

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Clarke Walker 609-883-5262

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### 2007 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 January Meeting

At 7:30 p.m. Clarke started the Meeting.



Joel May by Judge Landis

Joel May presented a history of removable memory. Joel started with a description of punch cards and ended with the latest on flash memory.

Editor's Note: Punch cards were used in the 1700 hundreds to control textile looms. Herman Hollerith patented punch cards on June 8, 1887 for use with mechanical tabulating machines in the 1890 U.S. Census. They were the size of that year's U. S. currency. They became very popular when IBM introduced their 80 column edition in 1964.

Go to [http://en.wikipedia.org/wiki/Punch\\_card#Hollerith.27s\\_punch\\_card\\_formats](http://en.wikipedia.org/wiki/Punch_card#Hollerith.27s_punch_card_formats) for more interesting information.

- Submitted by Clarke Walker



## Pictures from the January Meeting

by Judge Landis, [judge@alumni.princeton.edu](mailto:judge@alumni.princeton.edu)  
Member of the Princeton PC Users Group





## President's Message

By the time you read this Newsletter, Vista will have been released. No matter what you think about Vista, Computer History will start a new chapter. Let's hope it will be a fun and easy read.

This past month has been an interesting one with my computer. Several months ago I installed Norton System Works 2006. Since then I keep getting messages about "Installing Media Creator 7". They show up when I reboot and when I go to open an explorer window and when I go to delete a file and more occasions. Very annoying and there is no end in sight. That is why I have selected Al Gruber's article on "Registry Adventures". I think I am in the midst of one. I have also had my system get stuck in a reboot loop. I finally selected "reboot with known good configuration" and held my breath. To my surprise it rebooted correctly. I have no idea what this operation does but I am glad it worked.

This month we get to hear about fun gadgets for the home introduced at the recent Consumer Show. Doug Dixon risked getting sore feet to provide us with the latest.

Remember to invite your co-workers, family and friends to our meetings.

- Clarke Walker



## Treasurer's Report

| Expense                  | 2006 Totals      | Summary                           |                  |
|--------------------------|------------------|-----------------------------------|------------------|
| Newsletter Printing      | \$36.88          | Bank Of America Checking Account  |                  |
| Newsletter Postage       | \$0.00           | Opening Balance January 1, 2006   | \$ 5,933.10      |
| Hospitality              | \$31.63          | Closing Balance December 31, 2006 | \$ 6,477.98      |
| Capital Exp              | \$24.69          |                                   |                  |
| NJ Treasurer Report      | \$50.00          | <b>Difference</b>                 | <b>\$ 544.88</b> |
| TCF Parcel Pickup        | \$0.00           |                                   |                  |
| Insurance                | \$69.00          |                                   |                  |
| Post Office Box          | \$46.00          |                                   |                  |
| Misc. Postage            | \$0.00           |                                   |                  |
| Misc. Exp                | \$24.72          |                                   |                  |
| Misc. Printing           | \$0.00           |                                   |                  |
| APCUG Dues               | \$100.00         |                                   |                  |
| Group Sponsor Dues       | \$0.00           |                                   |                  |
| Domain                   | \$8.95           |                                   |                  |
|                          | <b>\$391.87</b>  |                                   |                  |
|                          |                  |                                   |                  |
| <b>Income</b>            |                  |                                   |                  |
| Dues                     | \$ 936.75        |                                   |                  |
| TCF Parcel Pickup        | \$ -             |                                   |                  |
|                          | \$936.75         |                                   |                  |
| <br>                     |                  |                                   |                  |
| <b>Income - Expenses</b> | <b>\$ 544.88</b> |                                   |                  |

Submitted by Judge Landis



## Link of the Month

Beautiful pictures from around the world:

<http://www.earthshots.org/>

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



## How Does Windows Handle USB Devices?

by Dave Gerber, [Dave\\_bytes@comcast.net](mailto:Dave_bytes@comcast.net)  
Program Chair, Sarasota PCUG, Florida

And member of the “Live on the Internet” Bits and Bytes radio show team, <http://www.davebytes.com>

One subject that often comes up is how Windows handles USB (Universal Serial Bus) devices and what you can do when USB devices don't work as you expect. First, let's talk about the two versions of USB that you'll probably encounter:

USB 1.1: these were the first widely-available devices and usually ran at a speed of 12 Mbits/sec (1.5 Mbytes/sec). They were meant to replace old-fashioned serial and parallel (printer) connections that ran at only a fraction of the speed and could connect only one device at a time. While this speed was OK for slow devices like mice and keyboards, it wasn't useful for transferring large amounts of data, like from digital video cameras. For faster speeds, you needed SCSI or FireWire (IEEE 1394) connections. Since these were used mostly on the Mac, you often needed an add-in card for your computer to use them, which is one of the inconveniences that USB was supposed to alleviate.

USB 2.0: typically runs at the much higher speed of 480 Mbits/sec (12 Mbytes/sec), which is faster than the original FireWire standard and much faster than SCSI. This is more appropriate for large data transfer, such as to external hard drives, and necessary to connect CD or DVD burners. However, some people still prefer FireWire for devices like video cameras, because FireWire is really a network that allows devices to be more interactive.

So how do you know which USB you have? If your computer was made sometime in the last few years, chances are its USB ports are version 2.0, which are backwards-compatible with 1.1 devices. One way you can tell which version your computer has is to look at the Device Manager in Windows XP:

- Press Windows Key + Break to open Device Manager (or click the Start button, then right-click My Computer and select Properties).
- Click the Hardware tab, then click Device Manager.

At the bottom of the list, click the plus sign next to Universal Serial Bus controllers.

If your computer has is equipped with USB 1.1, you'll see a device or two called a Host Controller or Open Host Controller.

If your computer is equipped with USB 2.0, you'll see a device or two called an Enhanced Host Controller or USB 2.0 Controller.

Any USB device you buy will have the regular USB trident logo and any high-speed USB device will have the red, white and blue high-speed logo.

If you connect a high-speed USB device to a low-speed USB port on your computer, Windows will probably give you a message that the device can run faster if you connect it to a high-speed port. A USB 2.0 internal expansion card costs about \$20 and a USB 2.0 notebook adapter (fits in the PC Card slot) costs about \$40.

The most common problem people have is when they connect a USB flash drive (sometimes called a thumb drive) to a computer and the computer doesn't recognize it.

First, let me say that these are great devices. Connect one to your computer and it works like a removable hard drive.

When you connect a USB device to a computer running Windows XP, the computer will detect it immediately. When that device is a USB drive, you'll probably see a message on the taskbar that Windows detected a new device, followed by a dialog box that asks if you want to open the drive to see its contents, play a movie and other choices. Windows will also assign a drive letter to the device. But sometimes you won't get this dialog box, and when you open My Computer manually ( Windows Key + E), you won't see the device listed. That means there's a drive letter conflict.

Here's how you fix it:

- Select Start/Control Panel, then double-click Administrative Tools. (You may also have Administrative Tools directly on the Start menu.)
- Double-click Computer Management.
- On the left side of the Computer Management console, select Disk Management.
- On the right side, you should see a device listed as a removable drive, probably with the same letter as another drive you're already using.
- Right-click the white bar where it shows the letter, then select Change Drive Letter and Paths.
- Select the letter, then click the Change button.
- Pick a letter not already in use from the list, then click OK.
- Click OK on the warning message, then click OK again. (I assign U: to all USB flash drives, since I never use more than one flash drive at a time.)

Close the Computer Management console. When you go back into My Computer, you should see the USB drive with the new letter.

Another common problem is running out of ports. When USB started being implemented, the idea was that you would daisy-chain the devices together. So computer manufacturers would put in only two ports (always in the back) and only one port on laptops. For a variety of reasons, the daisy-chain idea never caught on, and computers made today typically have four ports in the back and two in the front, for quick access.

If you run out of ports, you can fix the problem -- as with so many others -- by applying cash. Buy an external USB hub for anywhere from \$10 to \$40, depending on size, number of ports and power. A hub will split a single USB port into several more. The better ones have their own power supply, so your devices don't have to rely on the computer for powering the USB connection. When there isn't enough power to go around for all the devices, they can go offline.

This brings me to the last problem I'll mention: USB devices going offline because of reasons unrelated to power shortage. This was fairly common when you had many devices connected using USB 1.1 in versions of Windows older than 2000, where the devices had to supply their own software to get USB to work. (Native USB drivers were first included with 2000, then made more robust in XP -- and Vista, presumably). If this happens, simply unplug all the USB devices, then plug them back in one-by-one. If any are daisy-chained together, connect the parent devices before connecting the child devices.



## My Registry Adventures

by Al Gruber, [AlGruber@Comcast.net](mailto:AlGruber@Comcast.net)

Member of the SouthEastern Michigan Computer Organization, Inc. (SEMCO), <http://www.semco.org>

Suppose you try to delete a file on your Desktop, but instead the system starts to install a program. You furiously click cancel a dozen times, and it stops. So, you try the delete again, and it happens again, and again, even after rebooting. Evidently, some wires are crossed in your computer: the delete key is now assigned to installing a program called ScanSoft PDF Create. That's what made me delve into the registry.

By way of background, I've had problems with ScanSoft ever since their last upgrade, so I knew enough to demand that they remove their setup program, and hallelujah, that did give me back my delete key. But it made sense to me that this fixed only the symptom. Somewhere in there, the wires were still crossed. And that somewhere must be in the registry. Unfortunately, I didn't know enough about the registry—and though I know a little more now, I still haven't fixed the problem.

To start, I pulled down my copy of Windows XP Registry Guide, (Jerry Honeycutt), which I had always planned to read “one of these days.” It's a good book, but at over 450 pages, my mind wandered to the registry-cleaning program (System Mechanic 6) I had recently bought from ZoneAlarm. Their general idea is that they scan your computer for errors and then fix them. Not being that trusting, I finally found out how to stop them from making the fixes before I could review and approve them. Then I ran the program. Surprise, they had no proposed fixes. My Registry was perfect!

But I knew that was wrong. As I was following the Honeycutt book and inspecting the registry, I had discovered many out-of-date entries involving the Start > All Programs menu, some for programs I had uninstalled and others perhaps caused by my habit of combining programs under suitable headings. For example, I have a heading called Graphics that holds 10 different graphics-related programs.

When I asked the System Mechanic techie why their program might not find known registry errors, he explained that they must be shared programs, which I could pin down by running System Mechanic in protected mode. I did, and now found a grand total of 1 error.

I now decided to try some other registry cleaners. Here's a partial list of the commercial offerings: Error Nuker, Free Registry Fix, PC On Point, RegCure, Registry Fix, Registry Healer, Registry Mechanic, Registry Medic, System Mechanic.

Unfortunately, most of these programs give off a bad smell. These are inexpensive programs; most in the range of \$20 to \$30, but they all try to give the impression that they're free: e.g., “free download,” “free scan,” but to fix your registry, you must pay. The most egregious is “Free Registry Fix,” which claims on its opening screen: “the world's only FREE registry cleaning software on the market today.” Their price is \$29.95! Mind you, I understand their problem. Since I don't need registry cleanings very often, I might take my free cleaning without ever buying. But still, it's a shell game. And frankly, I am reluctant to give them my credit card. (Actually, there are at least 4 genuinely free programs, but they are a bit harder to find: CCleaner, EasyCleaner, RegScrubXp, Eusing Free Registry Cleaner.)

Another point is that the commercial product information is more hard sell than information. “Statistics show that over 93.7% of PC's have corrupted registries;” “Don't compromise with second best;” “100% guaranteed.” If there are product differences, and there clearly are, I couldn't find them in their literature. And of course, their documentation is weak. This was especially disappointing because I was hoping their documentation would give me a clue about my problem.

| <b>Errors Found</b>                 | <b>#</b> |   |
|-------------------------------------|----------|---|
| CCleaner (really free)              | 1000*    | These programs all use about the same approach. They offer to scan your registry (Free! Free! Free!). These scans invariably find lots of “dangerous” errors. To fix these, you must register the program, which is when you find out that it isn't free after all. The programs do give you one or two free fixes. But since all of them find hundreds of errors, you invariably have too many for their free offer. Incidentally, the program that claims to be the only freebie in the universe does give you 50 free fixes, but I don't think you qualify if you have over 50 errors. |
| EasyCleaner (really free)           | 251      |   |
| Error Nuker                         | 267      |   |
| Free Registry Cleaner (really free) | 1651     |   |
| Free Registry Fix                   | 740      |   |
| PC On Point                         | 739      |   |
| RegCure                             | 2374     |   |
| Registry Fix                        | 714      |   |
| Registry Mechanic                   | 430      |   |
| Registry Medic                      | 1575     |   |
| RegistryHealer                      | 3777     | After the scan, these programs go automatically into their repair phase, unless you have figured out how to opt out, which again took me quite some time. (The problem here is that they never tell you if choosing “fix errors” will still let you back out.)  |
| RegScrubXp (really free)            | 339      | So, after System Mechanic had said I had an error-free registry, here's the number of errors I found in the various programs:<br><br>Now, I knew System Mechanic was wrong when they said I had no errors. But when Registry Healer says 3,777 there must be some grade-inflation going on. After all, my computer boots and runs ok. The ScanSoft problem is a suspicion at this point, not a blue screen  |
| System Mechanic                     | 0        |   |
| * Estimate, no total supplied.      |          |   |

emergency. So why should I let Registry Healer repair these errors. I suppose it would speed boot-up and shutdown. Would it actually run faster? The sales pitch says yes, but as I said, I'm not that trusting.

To give you a little more feel, here are the warnings from "Free Registry Fix":

274 high severity problems—apps won't run, system may crash.

121 medium severity—app errors or won't run.

345 low severity—computer will run slow.

This seems like a good time to tell what little I have found out about the registry. First, it is loaded into memory when the computer starts. The part we are interested in resembles a Rolodex, a list of programs and their addresses. Entries are added when you install a program, and removed when you uninstall.

Apparently, not all programs uninstall properly; some entries are not removed from the registry—outdated cards left in the Rolodex. This may create a junky registry, but should not automatically cause problems. Another factor is that programs often involve multiple parts, hence multiple entries in the registry. So, if each improperly uninstalled program had 10 parts, the amount of junk might be that much greater. But aside from the wasted time riffling through left-behind cards, no real harm should ensue. Even if you call a contact whose number has been disconnected, all that happens is a no-answer, i.e., the program won't run because you uninstalled it.

Finally, there are other ways to cause registry junk. If you occasionally reorganize your Start button > All Programs menu, it turns out that old entries are not deleted from the registry. Example: I moved Word from its old category called MsWord to a new one called Microsoft. In terms of the Rolodex analogy, this is like adding a card when a contact changes her name. If she keeps her phone both cards are usable, but the old one becomes superfluous as you switch to using her new name.

Are we getting any closer to understanding how a group of registry cleaners can be so far apart in the number of errors they find? Hold on. Registry cleaners conduct their scans by problem categories that they describe with names that are suggestive but by no means clear. I think that the differences in their results are caused by which categories they pick, and perhaps how tight their rules are. (Though it seems likely that System Mechanic contains some programming errors.) Here are my guesses as to what their categories mean:

### Typical Registry Errors Categories

The first 5 items below are written into the registry at the time of program installation, but not always fully deleted at un-installation. Many registry cleaners offer to delete the useless left behind entries.

- 1. Software Locations:** At installation, applications enter their location in the registry.
- 2. Controls/ActiveX files/Shared DLLs, Browser Helper Objects:** Applications enter the location of their \*.dll and \*.ocx files in the registry.
- 3. Help Files:** Some applications enter the location of their help files in the registry.
- 4. Installers/Add/Remove Programs:** Applications enter the location of their install and uninstall programs files in the registry.
- 5. Start Menu and Startup (boot up) entries:** At installation, applications enter the location of both of these items in the registry.

The following items are written into the registry at various other times. The cleaners check to see if they represent real addresses. If not, they are useless and can be deleted.

- 6. Windows Services:** This tells the location of various Windows services.
- 7. Windows Fonts and Sounds:** These sections tell the location of installed Windows font and sound files.
- 8. File Extensions:** This lists file extensions (e.g.: \*.txt) and tells which if any applications may open them. If an extension lists no programs, or only nonexistent programs, the entry is useless.
- 9. History List:** This section is scanned for invalid history files paths.
- 10. Invalid Paths and Folders:** This section is scanned for any other non-existent files and folders.
- 11. Hardware Drivers**

To summarize, I am guessing that looking for somewhat different errors causes cleaners to get different problem counts. This is only a guess because their product descriptions aren't that specific. Surprisingly, nobody claims to look for more problems than their competitors. I suppose, on these grounds, I should pick Registry Healer because it finds (and fixes) the most errors.

But then, I must face the question; should I let Registry Healer delete the "problems" it reports, so that my system won't crash (which it doesn't do anyway) and will run faster (which I suppose is possible)? I admit that part of my reluctance is

fear. Whenever anybody mentions editing the registry, they first warn that you could cripple your computer for life, so back up first. And the registry cleaners themselves, of course, say that their software is not created for any useful legal purpose and that users cannot rely on them working.

Part of my problem is with the concept of backups. If my computer won't start after deleting the "problems," and if I had a backup, and, if I had a boot disk, and, if I could get into restore mode, I should be able to rescue the situation. But with my luck, the computer will start fine. Then three weeks later, some program I haven't run since the "cleanup" will not run. And three weeks is long enough (for someone with senior moments) that I probably won't connect it with the cleanup. And if I did, would I want to lose whatever new stuff I had done since then? No!

This brings to the fore one missing feature of all the cleaner programs. My specific problem is a possible registry error involving ScanSoft. But the cleaner programs don't let me search for ScanSoft errors. They just report what they want to report, and on top of that, they all want to report something different.

Speaking of features, here are some of the differences I noticed between programs: As you know, the cleaners find and delete calls to missing programs. A couple however, also search for the missing programs, so they can correct the call if they find it. I don't know how successful this is, but it makes sense to me. Registry Healer is one of these. For the rest, when they say *repair*, they really mean *delete*.

Another feature I like, is the ability to send a list of the errors to disk or printer. This caters to my cautious nature; it lets me think about the "problems" before agreeing to delete them. Registry Healer and EasyCleaner both offer this.

Another feature I found useful is that one click takes you from the error to the actual registry entry. Again, this reflects the fact that I was trying to investigate a specific problem, rather than running a housecleaning operation. About half the programs, including Registry Healer, offer this feature.

Finally, most but not all have some form of online documentation, though most of it is pretty amateurish. Their general rule is to explain the obvious (click scan to do a scan) (click cancel scan to cancel scan) but gloss over the mysterious, such as the purpose and implications of selecting certain registry categories.

Over the years, I have downloaded many trial versions of small-time programs, usually without knowing exactly what they are supposed to do, and why. If the documentation tells me why they made the program, that's a big plus in my purchase decision. And if it then explains logically and coherently how it works, I get confidence. If the documentation sounds smart, I believe the program is smart. By contrast, my problem with the registry cleaners is that they do lots of shouting but not much explaining.

Finally, as you know, I still have lots of questions. I am leaning toward Registry Healer, but haven't bought it yet. E-mail me if you have answers. Who knows, maybe we can do a sequel based on your expertise.



## XP Disk Maintenance Tools

by Dick Maybach, [N2nd@att.net](mailto:N2nd@att.net)

Member of the Brookdale Computer User Group, New Jersey, <http://www.pcc.org>

Windows disk operations have improved greatly over the years to the extent that we seldom have problems with XP. However, XP does include tools to inform you about your disks, to improve their operation, and, if needed, to repair the data on them.

For general information on your drives, use the *Disk Management* tool – right-click on *My Computer*; select *Manage*; and select *Disk Management* (under Storage). You will see a table showing the properties of all your partitions as well as a graphical summary. Select a volume in the table or on the graphic, click on the *Action* menu item, and then click on *All Tasks* to see a list of the actions you can perform. Be careful, as some of these are drastic and irreversible, e.g., format and delete the volume.

If you suspect that a hard disk is corrupted, double-click on *My Computer*, right-click on the desired drive, select *Properties*, select the *Tools* tab, click the *Check Now...* button in the Error-checking section, and click the *Start* button. This will run an updated version of the old *chkdsk*. Don't select either of the options. If you do find problems, run the program again, but before you click Start, select *Automatically fix file system errors*. You may have to reboot for the operation to complete. Also, be



aware that this may result in the loss of some files. If there still errors, run the program again, but select both options. (You can also run this program from the command line; type “chkdsk /?” in a Command Prompt window to see the options. I prefer the command-line version, because it’s more informative.)

With time, Windows collects many unneeded temporary files. To clean these up, double-click on *My Computer*, right click on the desired disk, select *Properties*, and click the *Disk Cleanup* button under the *General* tab. Windows will take a few minutes to analyze your disk, and then will display a list of actions and how much space each will recover. You can single-click on each name to see its description. I select everything except the last two (*Compress old files* and *Catalog files for the Content Indexer*). Clicking the *More Options* tab shows other ways to recover space by removing Windows components, removing installed programs, or deleting old system restore points. Under the *General* tab, you will see two check boxes, *Compress drive to save space* and *Allow Indexing Service to index this drive for fast file searching*. By default, the first is not checked and the second is; don’t change these. Large disks are very cheap, and if you are running low on space, a much better solution is to install a second disk and keep you user data on it. Compression adds complexity, and I’ve seen it cause serious problems.

With use, a disk gradually becomes fragmented. That is; long files are broken into parts and scattered over the disk. You can correct much (but usually not all) of this with XP’s disk defragmenter. Double-click on *My Computer*; right-click on the desired drive; select *Properties*; select the *Tools* tab; click on the *Defragment now...* button in the *Defragmentation* area; and click the *Analyze* button. Usually, you will be told that there is no need to defragment the volume. If so, take the advice. If you do decide to defragment the disk, bear in mind that there is a small risk of destroying its contents, since many files will be deleted and re-written – a power failure could be catastrophic. Before you defrag a disk, run *chkdsk* or, even better, back it up.

A little-known command-line utility is *fsutil*. To run this first open a *Command Prompt* window (found in the *Accessories* group), then type “fsutil” to produce a list of fsutil commands. Usually, you will have to stack up several *fsutil* commands to do anything useful. For example, typing “fsutil dirty query c:” will show you whether you need to run *chkdsk* on C:. It can be worthwhile to explore the other features this command, being careful of course that you don’t make any changes to your file system.

The *recover* command will make undamaged portions of a damaged file readable. For example, to recover the damaged file *c:\n2ndjunk*, open a *Command Prompt* window and type “recover c:\n2ndjunk”. Like most command-line programs, you should be careful when using *recover*.

A very powerful command-line program is *debug*, but you can do a lot of damage with it if you are not an expert; I recommend that you avoid it. If you are curious, type “debug /?” in a *Command Prompt* window to find out more about what it can do.

The NTFS file system is superior to the older FAT32 one. If you are still using FAT32, seriously consider converting it to the NTFS format. For example, to convert your C: drive to NTFS, open a *Command Prompt* window and type “convert c: /fs:ntfs”. There are two caveats: (1) the conversion is not reversible unless you buy third-party software, and (2) if you dual-boot both XP and an earlier version Windows on the same PC, the old version can’t read NTFS volumes.



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\*\* There is no restriction against any non-profit group using these articles as long as they are 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 Princeton PC Users Group is a member, brings their respective articles to you. \*\*

***All unattributed articles are solely the fault of the editor.***

# Remaining Meeting Dates in 2007

|          |              |
|----------|--------------|
| March 12 | August 13    |
| April 9  | September 10 |
| May 14   | October 15   |
| June 11  | November 5   |
| July 9   | December 10  |

## Membership Renewal

**Please** remember to renew your membership. If you can not attend the February meeting please send the form found on our web site and payment to our post office box.

Thanks!

Princeton PC Users Group  
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