

## Vista Aero & Applications

Aside from the many changes to the internal guts of Windows Vista, some changes are more obvious. Vista includes a new user interface Microsoft calls "Aero" as well as new and updated applications.

### Aero

Depending on your point of view, the new "Aero" interface on Windows Vista is either fancy eye candy or a major effort to leverage the horsepower in today's high-end gaming PCs. Aero will allow effects like 3D animation, transparency, blurring, shadows in motion, scaling of images and text, accelerated rendering and motion, and more. Vector-based graphics allow for high-quality images that can be infinitely scaled in size.

Vista itself leverages these advancements in subtle ways such as using transparency to see what windows are behind the active program, without detracting from usability. That may sound hokey until you are trying to find one document out of 20 open windows. "Live" icons of documents show scalable images of the document itself for easy selection. Flip 3D upgrades the Alt+Tab task switcher to show an angle view of all open windows at once, rotating between them.

Making life easier was a goal of Vista: Start menu and Control Panel allow users to type in text to easily find programs. Explorer provides pull-down "bread crumbs" to facilitate navigation backwards to higher level folders on your disk. All Explorer windows sport a common Favorite

*Continued on page 3*

## Inside Windows Vista

After five years and millions of lines of code, Microsoft has finally released the latest version of their flagship Windows operating system. So how does it stack up? We'll look at the pros and cons and tell you our opinion.

### Security

After years of bad press and dozens of updates for Windows XP, a major design goal for Vista was improved security. The most controversial feature, User Account Control (UAC), blocks unauthorized changes to the operating system by running programs at a low privilege level. UAC detects when an important change is made to the system, such as a spyware program trying to install itself, or changes are made to the network configuration, and prompts the user to verify the change. However UAC tries to block *any* conceivable risk, asking the user for permission when opening everything from System Restore to Disk Defragmenter and adjusting font sizes. Unfortunately experts fear users may get so used to clicking on myriad prompts they gloss over one that really matters.

Other changes have been made as well. Under Vista (and unlike Windows XP), Internet Explorer 7 runs in Protected Mode which isolates the browser and its add-ins, so any malware cannot infect the system. Windows Firewall can now be set to block unwanted outbound connections, which could be used to detect and block spyware from communicating with the Internet. Windows Defender is bundled in to Vista, however reviews have been lukewarm since other programs provide better spyware protection. Defender does help users detect and configure running programs, as well as which programs run automatically at startup.

Parental controls are now built in to Vista. Parents can control when and how a PC is used, from the applications run to the times and days the computer can be used, in an easy-to-use interface. Vista also provides reports on usage history.

### Networking

Network setup, configuration, and management is much easier in Vista's new Network and Sharing Center. The Network Map provides a graphical view of the network with details about each PC, switch, router, and wireless access point. Network Map works best when other PCs run Vista as well, but Microsoft plans an update for Windows XP that should help.

Wireless networking is much easier as well. Vista shows nearby networks along with details of each, such as the speed, security settings, and so on. Vista will remember which wireless networks you use and can automatically connect to each when they are in range. Vista

*Continued on page 2*

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*Inside Windows Vista*  
...continued from page 1

will also detect when a laptop has two connections (wired and wireless) and use the faster one.

## Business Features

Businesses can use Vista's expanded support for Group Policy to lock down certain aspects of the operating system. Administrators can prohibit use of USB memory sticks yet allow users to connect USB printers. Just like Windows XP on a Windows Server domain, Group Policy can also be used to require screen saver passwords, prohibit access to certain programs, and more.

Security-conscious companies will also love the new BitLocker drive encryption in Vista Enterprise and Ultimate. Originally designed for laptops, BitLocker encrypts the hard drive contents, blocking thieves' access to sensitive data.

Microsoft packed in improved diagnostics, recovery, and monitoring, to reduce help desk expenses. Vista also improves the upgrade process, making it easier to upgrade an existing PC or migrate to a new PC.

## Conclusions

As we discuss in our online article detailing the five editions of Vista, the new OS eats up RAM and loves fast video cards. Don't plan to upgrade existing PCs that have less than 1-2 GB of RAM (depending on the edition of Vista) or have integrated video adapters. For PCs that have the hardware, however, Vista's improved security make it worth the upgrade.

Businesses and home users should ensure their critical programs are compatible with Vista, as well as hardware like scanners and printers. For example, 64-bit versions of Vista cannot run DOS or Windows 3.1 programs. Microsoft has a downloadable Upgrade Advisor to assist with assessing hardware compatibility.

For the rest of this long article, including information on new power saving features, ReadyDrive, and the demise of the Documents and Settings folder, visit [teamITS.com/connection](http://teamITS.com/connection).

# Trends

## Holographic Storage

Star Trek and Star Wars fans have known about "holo cube" technology for years, but not until recently has holographic recording technology existed in real life.

For decades computers have focused on magnetic media for storing large quantities of data, with forays into optical media with laserdiscs, CDs, and DVDs. However all of these methods use only the surface area of the media for recording.

Hitachi-Maxell and InPhase Technologies (a spinoff of Bell Labs) have partnered to come up with a holographic drive and media that uses the full depth of the media to store data. Surface recording typically stores data one bit at a time, constricting recording speeds. However holographic media allows millions of bits to be written or read at once, in parallel, drastically increasing data transfer speeds.

Holographic technology is well-

suited for video production and distribution, as well as storage of large amounts of data. Write-once media will satisfy legal requirements for long-term storage.

First-generation cartridges have a capacity of 300 GB and a transfer rate of 20 MB per second, comparable with today's tape drives. Second-generation hardware expected in 2008 will offer 800 GB capacities and four times the data transfer speed, with later versions expected to further increase.

Currently the main drawbacks to inexpensive portable storage are speed and capacity. Tape drives can write large amounts of data but must wait for the tape to move past the drive head. Hard drives are much faster but more expensive and not as portable (for off-site storage). By contrast holographic media promises to quickly store large amounts of data in a portable format, that can be stored for a long time.

# Humor

## You Are An Internet Addict When...

*by unknown*

You step out of your room and realize that your spouse has moved... and you don't have a clue as to when it happened.

Your bookmark list takes 15 minutes to go from top to bottom.

Your nightmares are in HTML.

You start introducing yourself as "Jim at aol dot com."

Your heart races faster and beats irregularly each time you see a new web site address on TV.

You turn on your intercom when leaving the room so you can hear if new e-mail arrives.

All of your friends have an @ in their names.

Your dog has its own home page.

You can't call your mother...she doesn't have a modem.

You check your mail. It says "no new messages." So you check it again.

You write your homework in HTML and give your instructor the URL.

Your husband tells you that he has had the beard for 2 months.

You wake up at 3 a.m. to go to the bathroom and stop and check your e-mail on the way back to bed.

You tell the kids they can't use the computer because "Daddy's got work to do" - even though you don't have a job.

Your wife says communication is important in a marriage...so you buy another computer and install a second phone line so the two of you can chat.

As your car crashes through the guardrail on a mountain road, your first instinct is to search for the "back" button.

# Tips

## Fine Tuning Spam Filters In ITS Mail Guard

Typically ITS Mail Guard does a great job of sorting out spam from valid e-mail. We have found it more accurate and more convenient than other solutions like the filtering built in to Microsoft Exchange. However, even though the default settings are fine for most users, some may still want to tweak the filters. Such adjustments require careful balance to avoid blocking valid mail. Most users prefer receiving a few spam messages than having valid mail quarantined. Therefore ITS recommends the following steps be used. To adjust these settings, go to [teamITS.com/start](http://teamITS.com/start) to log in to your personal ITS Mail Guard Message Center, and click Settings.

1. Add e-mail addresses or domains of important customers and vendors to your Approved Senders list. Do *not* add your own domain; many spammers will try to fake messages as coming from your own domain name, and that would let all those messages through.

2. To block mail from an e-mail address or even an entire domain, add it to your Blocked Senders list.

3. When raising the Overall Junk E-Mail Blocking filter by one level, also click Show Individual Filters and *lower* the filters for each category. If a specific category of spam (e.g., "Get Rich Quick") still gets through after a couple days, raise that category filter one level.

4. Make small adjustments such as adjusting one filter at a time, and test for a few days, before changing more. After adjusting filters, carefully review the next few daily Quarantine Summary e-mails showing which messages were quarantined.

Remember: the lower the setting for the Overall filter, the higher each individual category filter must be to have the same effect. Raising a category's filter level is more likely to falsely quarantine messages than raising the Overall filter level.

## Q & A

### Now that daylight savings time will start three weeks earlier in 2007, will my computer's clock adjust?

Starting in 2007 daylight savings time in the U.S. starts three weeks earlier and ends one week later. Software companies are hustling to roll out updates so computers will adjust their clocks on the correct day. This change impacts Canada as well, but not Mexico. Potentially any program that handles time stamps could be affected, such as e-mail programs, calendars, operating systems, and web servers.

Of note, Microsoft no longer supports older operating systems and software like Windows 98, Windows Me, Windows NT, and Outlook 97, so will not be issuing an update. However, newer programs will have updates issued between January and February. For example Windows XP has an update available via Microsoft Update that is

actually issued as an optional update...to download it choose the Custom option in Microsoft Update and select that update (but don't be confused by the update for Australia).

View this Q&A online for a link to Microsoft's page on daylight savings time ([www.teamITS.com/connection](http://www.teamITS.com/connection)). **Is integrated video compatible with Windows Vista?**

Windows Vista's new "Aero" interface will require more horsepower than many business computers can provide. For years, cheaper mass-market PCs have used built-in (a.k.a. integrated, shared) video to lower costs, however, most likely these PCs will not be able to use the new Aero interface. That does not mean Windows Vista will not work! In fact Vista can run without the new interface, but users will have to forgo Aero features like transparency, live icons, and the Flip 3D program switcher.

### Vista Aero and Applications ...continued from page 1

Links area to hold shortcuts to often-used folders and documents.

Since it requires some hefty hardware, the new Aero interface is not available on Windows Vista Home Basic, and will not run on PCs that don't meet minimum hardware standards. For more details, see our online article comparing the five editions of Windows Vista at [www.teamITS.com/connection](http://www.teamITS.com/connection).

## Applications

Windows Calendar finally brings a free, advanced calendar program to the masses. Outlook users may still want to stick with that calendar, but for the home users in particular Windows Calendar is a great way to share calendars with other users on the same PC. It is also iCalendar compatible to allow users to easily import appointments or subscribe to calendars posted on the Web.

The gadgets found on Vista's Sidebar are very similar to the widgets of Mac OS X, providing information such as a stock ticker, weather, notepad, and CPU/RAM usage. The Feed Headlines gadget captures Internet news feeds and display clickable headlines throughout the day (see [www.teamITS.com/whatsnew](http://www.teamITS.com/whatsnew)). Sidebar can be set to various levels of transparency, making it seem like it doesn't take up much screen space.

Backup appears to be a weak point of Vista, with its all-or-nothing backup strategy preventing backup of individual files or folders. Likewise, Meeting Space lacks a common whiteboard and voice-chat feature.

Windows Movie Maker and DVD Maker (found in Home Premium) are major upgrades, and Photo Gallery provides easy organization of photos with basic editing tools such as red eye reduction. Business and higher editions of Vista include Fax and Scan.

E-mail is still included for free, but is renamed Windows Mail instead of Outlook Express, which keen users probably noted was not included with Internet Explorer 7 for Windows XP.

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