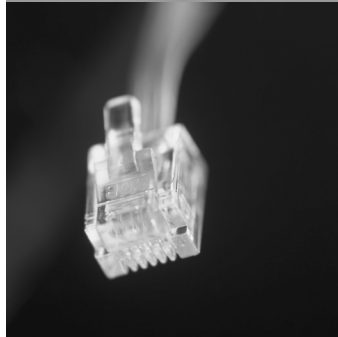


*Computer &
Technology
Workshops for
Faculty, Staff,
& Students*



Windows 7: Overview

Delivered by ITS Training Services for Penn State

ITS Training Services

23 Willard Building

University Park, PA 16802

814-863-9522

itstraining@psu.edu

<http://its.psu.edu/training/>

Alternative Format Statement

This publication is available in alternative media upon request.

Statement of Non-Discrimination

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Discrimination or harassment against faculty, staff, or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901; Tel 814-865-4700/V, 814-863-1150/TTY.

TABLE OF CONTENTS

INTRODUCTION	2
WHAT'S CHANGED IN WINDOWS 7	2
The New Task Bar	2
Aero Peek	2
The Windows "Orb"	3
The Start Menu	3
Windows Aero: Snap, Preview Desktop, Shake, and Flip3D	4
Windows Explorer	5
Windows Defender.....	7
WHAT'S NEW IN WINDOWS 7	8
Jump Lists.....	8
HomeGroups	8
Libraries.....	9
XPS Viewer.....	9
Gadgets	10
Problem Steps Recorder.....	10
Sticky Notes.....	10
Snipping Tool.....	11
Previous Versions	11
Redirect Profile Folders.....	12
Device Stage	13
MANAGEMENT AND ADMINISTRATION	14
Action Center	14
Network and Sharing Center	14
Virtual Hard Drives.....	15
XP Mode.....	16
MIGRATION TO WINDOWS 7	17
System Requirements.....	17
Upgrade Methods	17
Windows Easy Transfer	18
Upgrade Paths.....	19
Upgrade Matrix	19
Version-Feature Matrix.....	20
APPENDIX	22

Windows 7: Overview

OBJECTIVES

Participants will be able to

- Find and use updated and changed features
- Leverage new components and applications such as Jump Lists, Libraries, and Home Groups
- Explore features for system management and administration
- Describe Windows 7 system requirements, upgrade paths, and upgrade options

INTRODUCTION

Because so many people have moved directly from Windows XP to Windows 7, this handout refers to any Windows features released after XP as new. Some individuals who have experienced Windows Vista may recognize these features. Regardless of the platform from which you are migrating, this resource should help you adjust to the learning curve that accompanies Windows 7.

WHAT'S CHANGED IN WINDOWS 7

The New Task Bar



The taskbar is located at the bottom of the Windows desktop. By default, when an application opens, you will see its icon appear in the Taskbar. However, when the application is closed, that icon goes away. For commonly-accessed applications, users can place a permanent icon on either the Taskbar or in the Start menu. This is referred to as “pinning”. To pin a program to the Taskbar, once the application is open, right-click its icon and select **Pin this program to taskbar**. If you want to rearrange a program’s location on the taskbar, just drag the item to the desired location. To pin a program to the Windows Start menu, click the orb, then search for the application from the field in the bottom of the resulting menu (programs will appear in the top of the results list). Right click on the application, and select **Pin to Start Menu**. To unpin an application, just right-click it again and select **Remove from this list**.

Aero Peek

Aero Peek is a utility that is used to preview open programs from the taskbar. Programs that are open are indicated as such by an illuminated icon (see the blue arrows in the example above). There can be multiple simultaneous instances of a single application open at one time. To preview instances of a program, you can hover over the icon for that application. As shown in the example below, by hovering over a program icon, we can preview all open instances of a program. In this case, we have previewed instances of the Firefox web browser. By mousing over one of these instances, you would see its full preview on the desktop. You can close an



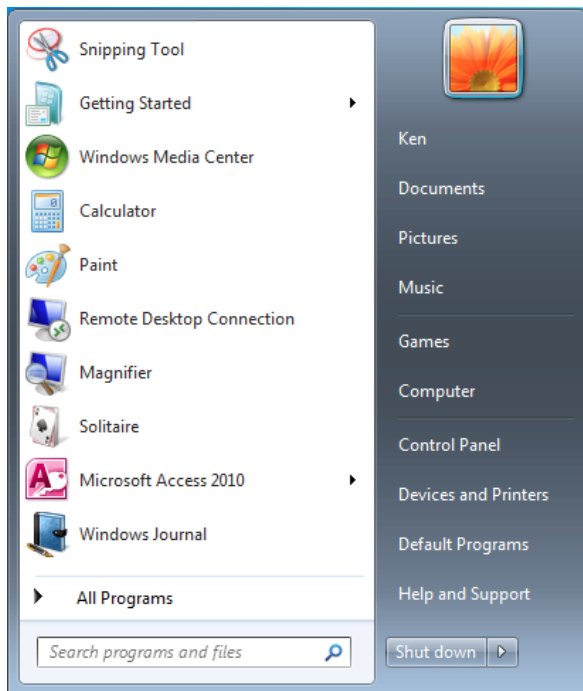
instance using its thumbnail, or select which one should be displayed on the desktop by clicking on the desired thumbnail.

The Windows “Orb”



What used to be known as the Start button gets a face lift after XP, and is now referred to as the Windows Orb, and is located on the left side of the taskbar. The thought here is that there are many things that are done from this location that have little to do with starting. While the function is essentially the same, the interface will look somewhat different (if you skipped Windows Vista). Clicking the Windows Orb still produces the Start menu, as shown below, but there are notable changes there as well.

The Start Menu



Your profile is found at the top-right and displays the name of the currently logged-on user. The *Run* dialog box has been replaced by a powerful search utility at the lower-left corner. (Search capabilities will be covered later.) The displayed applications on the left side will change depending on what has been used recently and most often. As mentioned above, you can permanently add a program to the *Start* menu by right-clicking and pinning it. Also improved over XP is the way that applications in *All Programs* can be explored in a more efficient *Windows Explorer*-like manner.

Windows Aero: Snap, Preview Desktop, Shake, and Flip3D

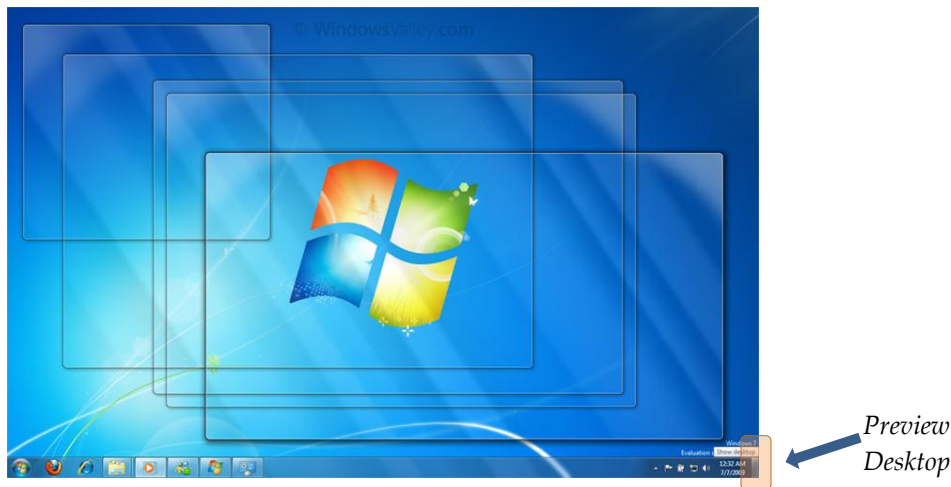
Windows 7 has introduced several new graphical user interface features for desktop and windows management. These are collectively referred to as *Aero* and are explained briefly below:

Docking Windows

Windows 7 now incorporates a feature that allows for windows to be “docked” or “snapped” to the sides of the desktop, taking up half of the screen space. A window can be docked to the left or right side of the screen. To do this, just drag the window to the side where you want it to be docked. Unclick the mouse button once the mouse pointer hits the left or right side of the screen. To undock a window, just drag it toward the center of the desktop.

Preview Desktop

As most Windows users have experienced, the desktop can get cluttered very quickly when multiple windows are opened over the course of time. On the right side of the time and date on



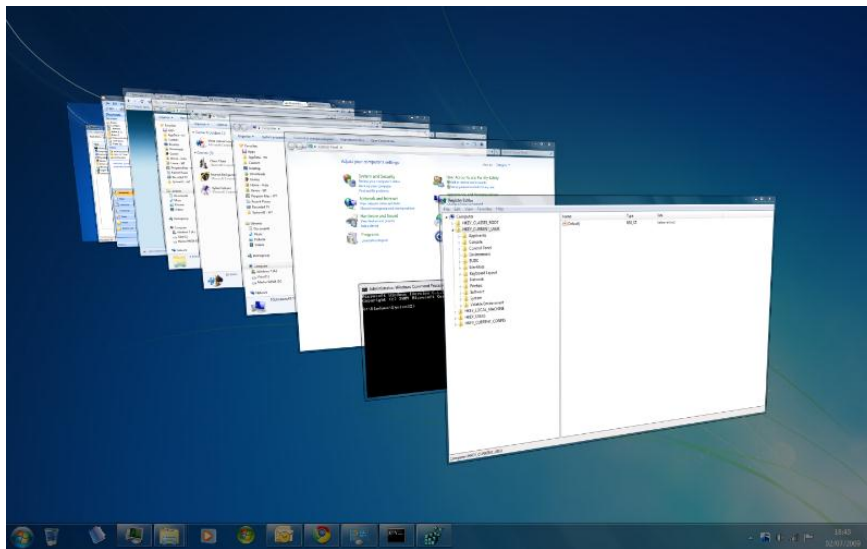
the taskbar is a hotspot – a small box (highlighted above) which is used to trigger a function called *Preview Desktop*. When a user holds the mouse over this box, all windows are made transparent, and the desktop can be seen temporarily. When the mouse is moved off of this hotspot, the windows are restored. This hotspot provides a toggle function: clicking it minimizes all windows to the taskbar; clicking it again restores the windows to the desktop.

Aero Shake

In some cases, you want to minimize all open windows with the exception of a single program. In Windows 7, you can accomplish this by clicking the title bar of the desired window, holding the left mouse button, and shaking the window. All other windows will be minimized to the task bar. To restore all windows back to the desktop, just shake the window again.

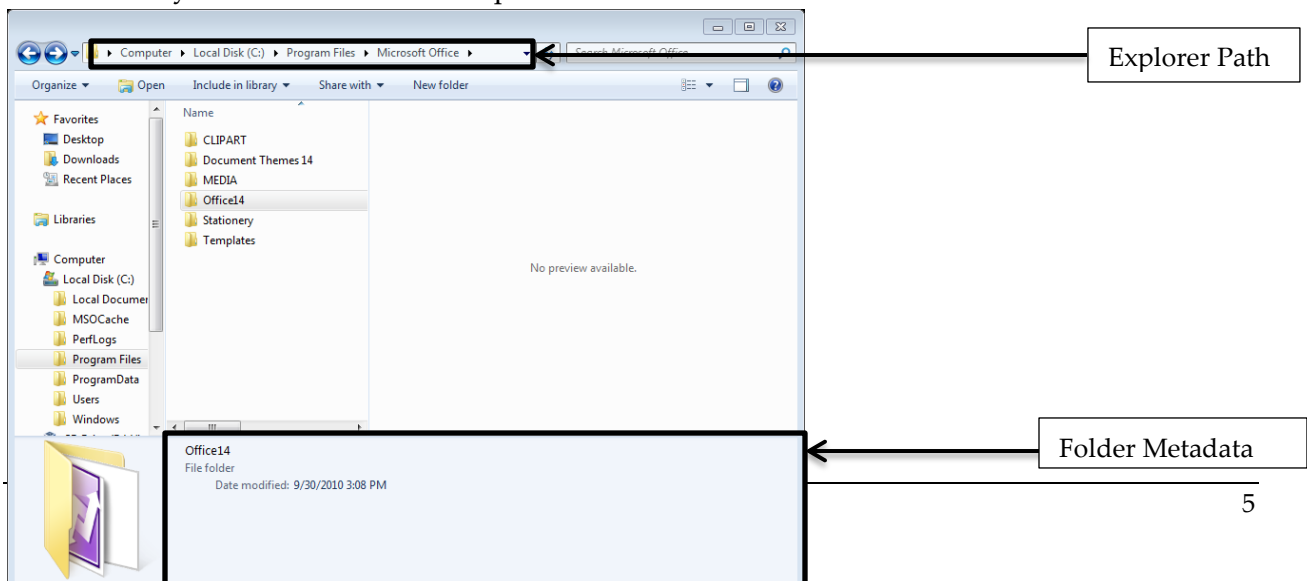
Flip3D

Windows now includes the ability to cycle through open applications using a three-dimensional mechanism called *Flip3D*. To use it simply hold the **Windows** key and tap the **Tab** key. This rotates the selections until the desired window is displayed. Repeating this process while holding the **Shift** key rotates the selections backwards. Releasing the **Windows** key brings the selected window to the forefront.



Windows Explorer

Windows Explorer has become a very powerful utility for navigation and searching directories for files the system. The field at the top used to contain an address like *C:\Documents and*

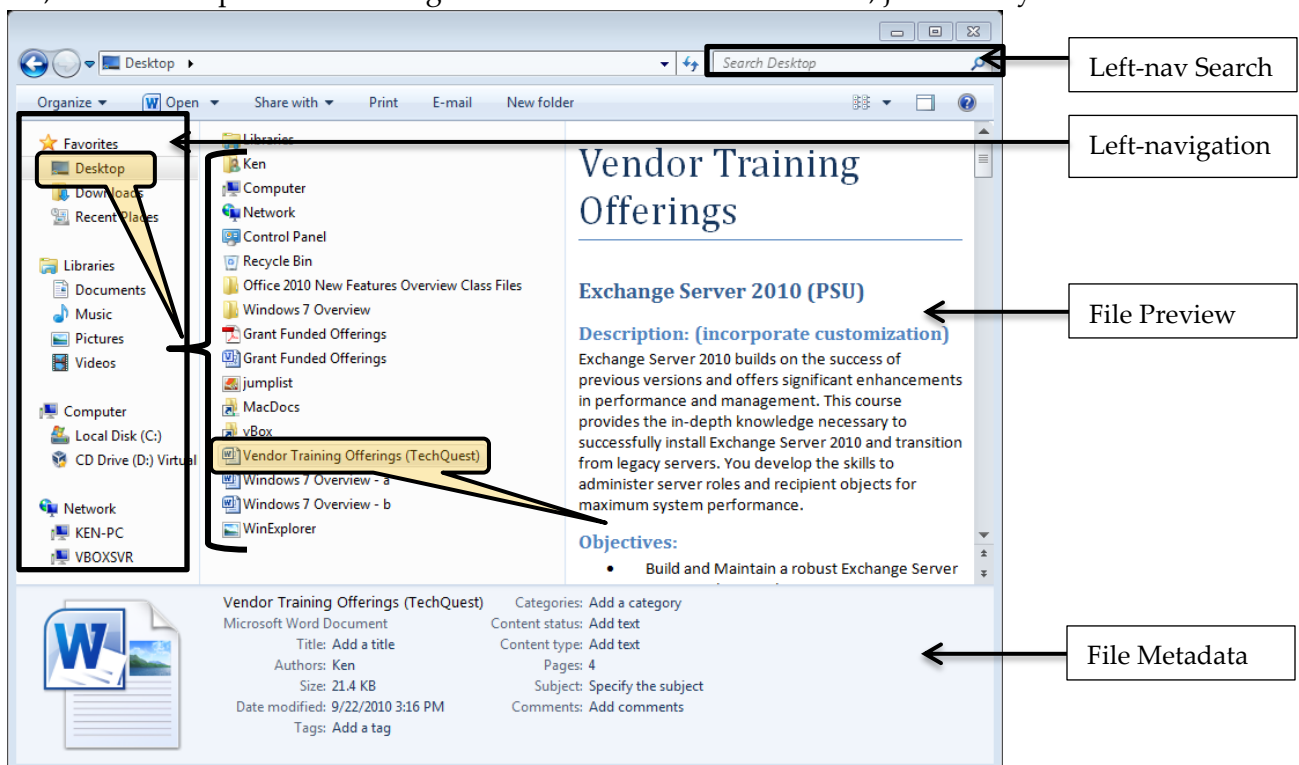


Settings\Directory. This address is now much more functional. You can still see the path, but now you have the ability to click an arrow to the right of any directory in the path and perform branched browsing from that point. You can still get that old-style path name by clicking to the right of the address.

Windows Search

You can also perform location-specific searches from any directory. Just navigate to the folder and initiate your search from the search field in the upper-right corner of the window. Next, Windows Explorer now gives you the ability to preview documents as you select them from search results. This is an option which can be enabled and disabled on the right side of the *Menu Toolbar*. Finally, the pane at the bottom of the *Explorer* window provides a way to view and modify the metadata associated with your documents. Much of this metadata can be used to perform advanced searches. For example, from any search field, you can type **tags: *******, or **category: *******, or **author: *******, etc to restrict the results of a search to metadata from that field.

With the improved search capabilities of Windows 7, finding programs, documents, and utilities has never been easier. From the *Start* menu, as you begin typing what you're looking for, results are updated and categorized in the search results. Then, just make your selection for

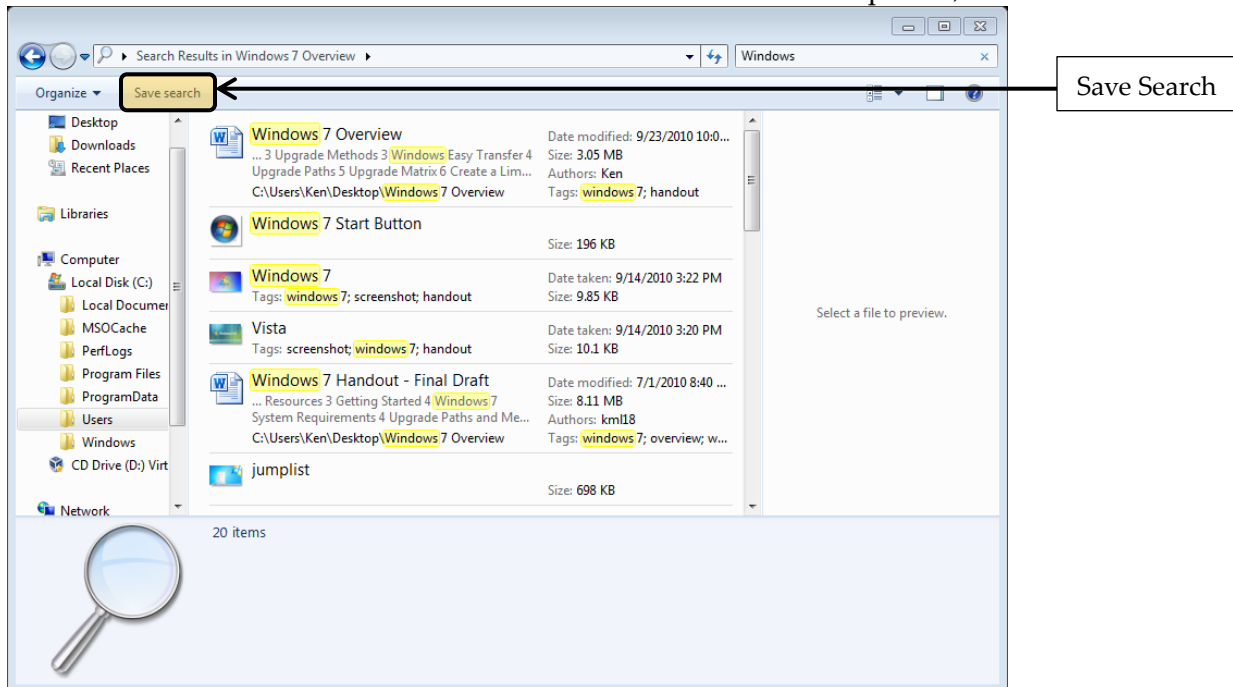


the resulting list. You can also search from within specific locations in *Windows Explorer*, including libraries by selecting the location in the left-navigation and entering the search criteria in the search box in the upper-right corner of the window. If you have defined tags in your

documents, you are able search the tags field as well, using the *Tags* criteria. You can use Boolean operators such as AND and OR to refine your searches.

Saved Searches

If you have defined search criteria that you are likely to use again, you can save a search for later use. The specific results of saved searches are never stored, as the search simply runs the query using the same search criteria every time it is run. In the example below, a folder on the desktop is searched using the search term “Windows” (see the upper-right corner). Saved searches are maintained in the *Searches* folder located in the user’s profile, on the Start menu.



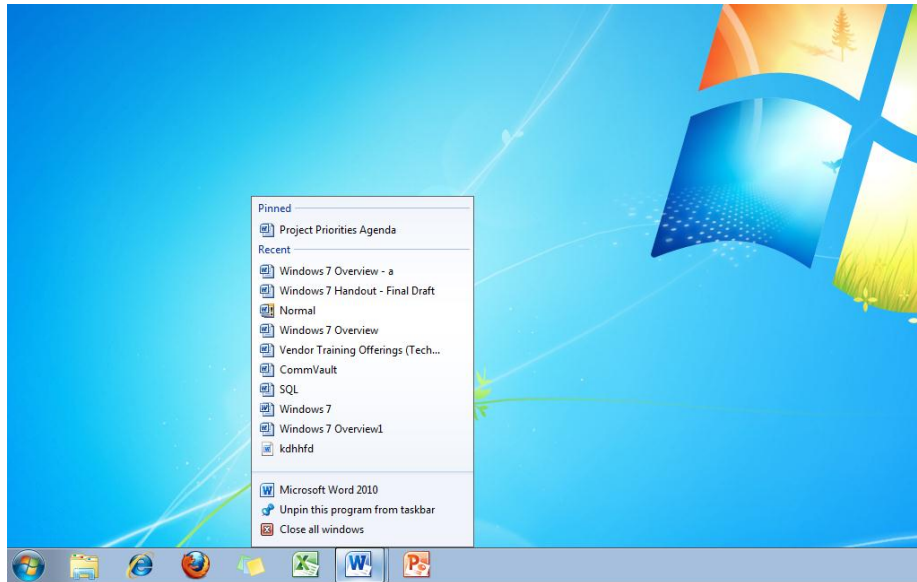
Windows Defender

Windows Defender is Microsoft’s solution to protect systems from Spyware. Spyware is malware that doesn’t infect or damage a system directly, but instead monitors the behavior of logged on users, and can certainly have undesired effects on privacy, security, and system performance. As with other programs that scan for malware, it is important to ensure that the definitions are updated regularly, and that Defender is configured to scan automatically. Part of Windows Defender in previous versions included a utility called Software Explorer which was used to identify programs that were configured to run at startup which may have been a burden to system performance. Using this utility, these programs could be disabled or removed from the Startup group. Software Explorer does not exist in the new version of Windows Defender. If you are using a Penn State-managed system, Defender will likely be disabled. Instead, Symantec Endpoint Protection is generally installed to mitigate risks associated with spyware.

WHAT'S NEW IN WINDOWS 7

Jump Lists

Jump Lists give you the ability to quickly access files without the need to browse to their location in the directory. To access jump lists from the taskbar, just right click an application icon to see the most recently opened files pertaining to that application (see figure below). If you right-click an application, you can pin the document to the jump list to keep it in the list until you explicitly remove it. This is similar to the way programs can be pinned to the Start menu.



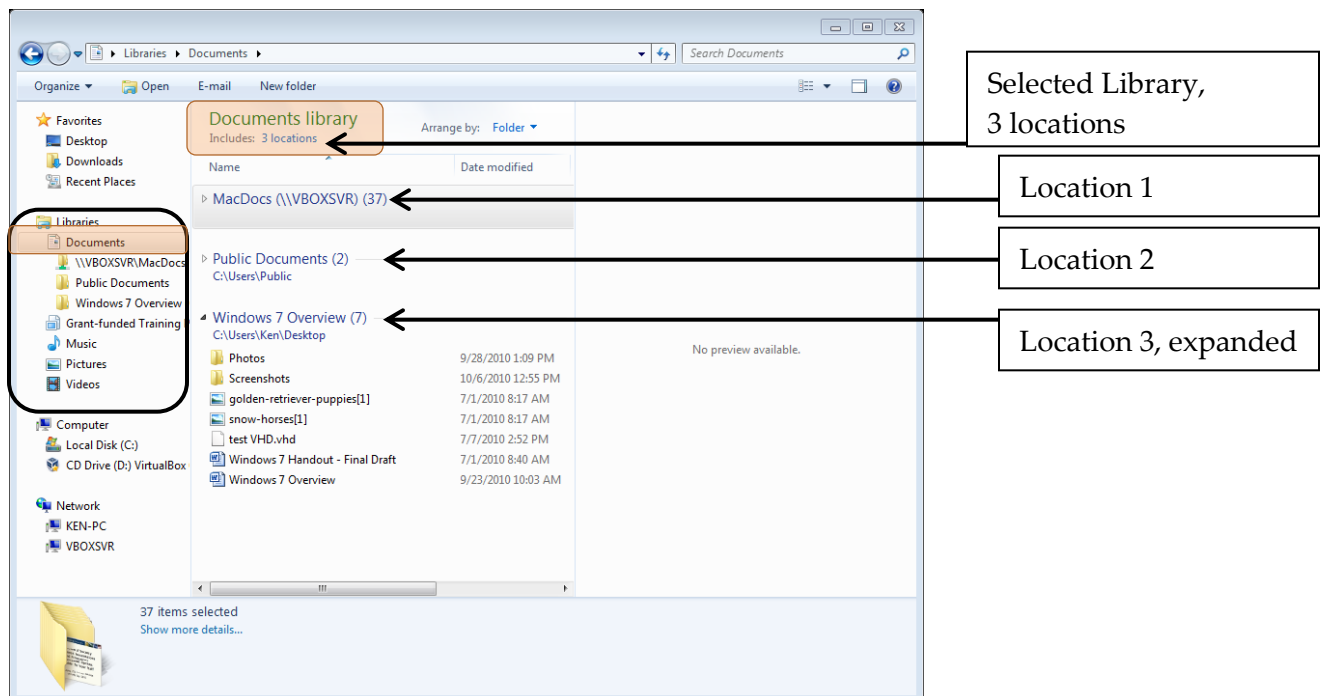
You can also access Jump Lists from applications pinned to the Start menu by hovering over the application in the list, as shown below. By right-clicking a file from the Jump List, you can pin it to or remove it from the list. Bear in mind that removing a document from a jump list will not delete the file, it just removes it from the list.

HomeGroups

HomeGroups are designed to simplify the task of sharing printers, media, and data between systems on a home or small-office network. HomeGroups will only work with systems that are running Windows 7 and beyond. To start or connect to a HomeGroup, the connected network type must be defined as a *Home* network rather than a *Public* or *Work* network; this is done from the Network and Sharing Center. Each system on a home network can create a HomeGroup and, once a Homegroup has been set up, any other Windows 7 user on the local network can connect to any HomeGroup as long as they have the required password. While a computer can only belong to one HomeGroup at a time, each system that belongs can define its own set of data to be shared. Once a Homegroup is configured, users can browse files and media of other systems from the navigation within Windows Explorer. It should also be noted that individual folders can be shared with HomeGroups as Read Only or Read/Write resources. To do this, right-click the folder to share and select **Share with → HomeGroup**.

Libraries

Libraries are an impressive evolution in document management and enable you to take directory organization to the next level. Libraries are aggregation points for folders that contain similar types of content. They don't actually contain anything; you can think of Libraries as categories that pull together other directory locations. By default, there are four libraries – Documents, Music, Pictures, and Videos – but you can create as many additional Libraries as you like. You can also add as many locations to these libraries as you like. In the example below, the Documents Library has been selected. You can see it contains 3 locations. To create a new Library, right-click **Libraries** and select **New**. Once a library has been created, you can add locations and examine contents from a single view.



There are two primary ways to add a location to a library. The first is to add it from the context of the library itself. To do this, click on the Library to which you want , and then click on the **# locations** link under the library's name. From here, select **Add** and browse to the folder you wish to add. The second way to add folders to libraries is to directly add the folder. To do this, right-click a folder in *Windows Explorer* and select the **Include in Library** option.

XPS Viewer

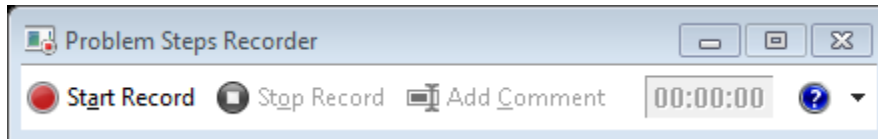
Windows 7 comes with a program called the XPS Viewer. This is, essentially, Microsoft's answer to Adobe's Reader. Unlike PDF, the XPS format supports tagging which makes the documents findable using a user-defined taxonomy. Documents created using Microsoft Office 2007, for example, can be saved in the XPS format, which prevents the modification of content in the document. XPS files are based on the newer, more extensible XML language.

Viewers for other platforms are also available, such as NiXPS for Mac. Existing PDFs can be converted to XPS using converter tools. These converters are available online for free download.

Gadgets

Gadgets, introduced in Windows Vista, are graphical utilities that provide quick utility functionality, such as weather, stock ticker, and headlines, from the desktop. Unlike Windows Vista, with Windows 7, Gadgets can be moved anywhere on the desktop. To add a gadget, right-click your desktop and select **Gadgets**. From there, just drag the one you want onto the desktop. The default set of Gadgets can be added by right-clicking the desktop and selecting **Gadgets**. If you wish to search for additional Gadgets, you can do so by selecting **Get more gadgets online** in the lower-right corner.

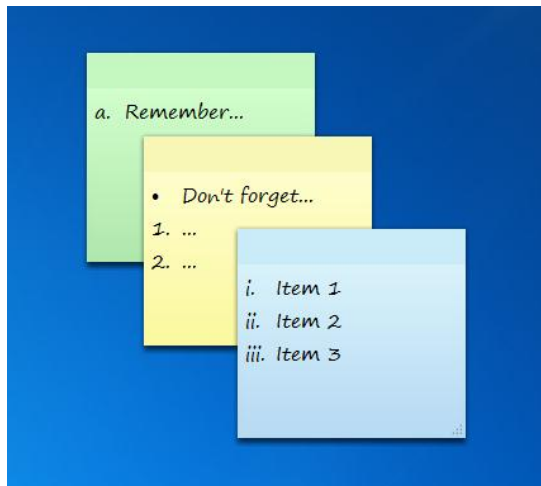
Problem Steps Recorder



The Problem Steps Recorder (PSR) is a nice utility for getting help when troubleshooting system problems. PSR will capture a video recording of the steps taken when recreating a problem. To launch the PSR utility, in the Search box, type "psr". From there, just start the recording, take your steps, and click **Stop Record** when you're finished. The resulting file will be a compressed and compressed file that can be emailed which contains a time-stamped file that opens in Internet Explorer. This file includes the OS and application versions and displays captured screenshots and details from mouse-clicks and keystrokes.

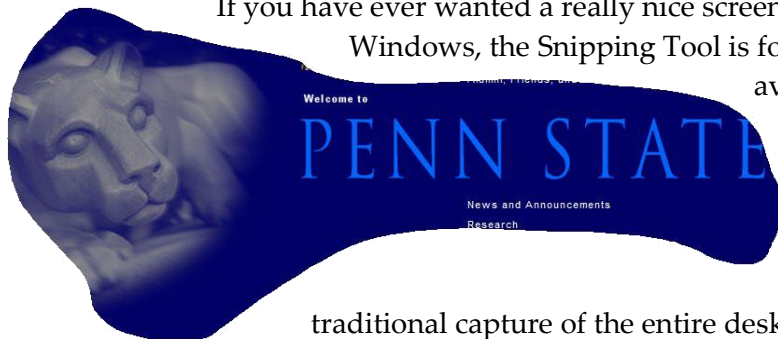
Sticky Notes

Sticky Notes provide the ability to create quick, reminders on the fly, and attach them to the desktop. When using touch-capable hardware, Sticky Notes can be selected and moved on the desktop by touch. To launch Sticky Notes, click the **Windows Orb** and type "Sticky" into



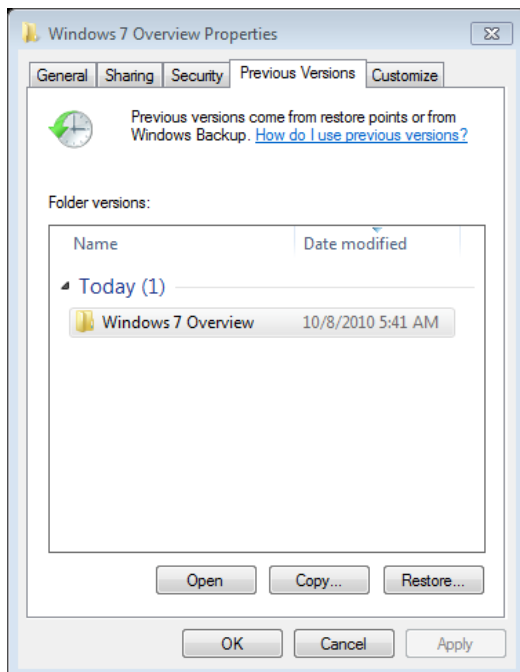
the search field. You can create bulleted or numbered lists by pressing **Ctrl+Shift+L**. To change the color of the note, just right click on the note and choose from one of six choices. With a note selected, you can create a new note by clicking on the + symbol on the upper-left, or delete the note by clicking the X symbol in the upper-right. Content in Sticky Notes is persistent and will remain after logging off or rebooting the system.

Snipping Tool



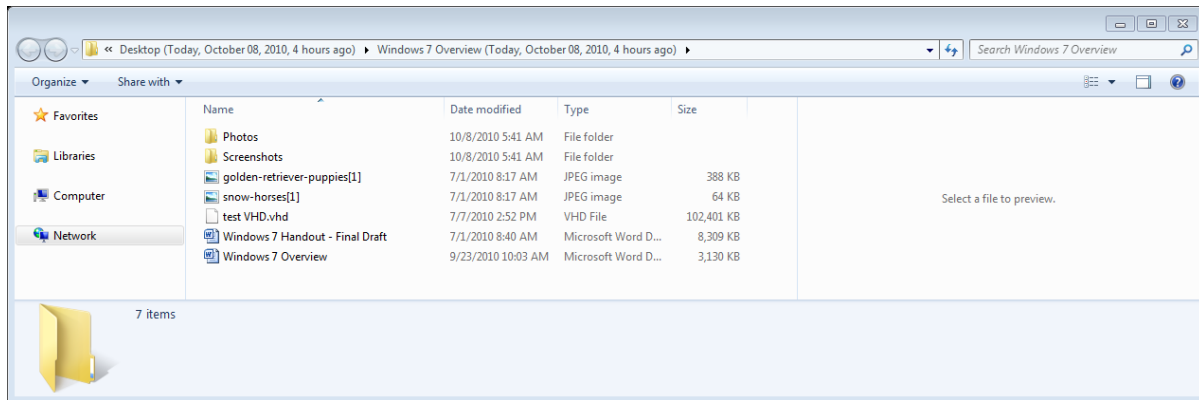
If you have ever wanted a really nice screen capture tool, integrated into Windows, the Snipping Tool is for you. There are four types of available captures: 1) *Rectangle*, where you can designate the corners of the capture by the drag of the mouse, 2) *Window*, where you can select a window to capture, 3) *Full-screen*, a traditional capture of the entire desktop, and 4) *Free-form*, where the outline of the capture is determined by dragging the mouse around the perimeter of the item to be captured. The resulting captures can be annotated using a highlighter or colored pens, and saved as a jpeg, gif, png, or mht file. To apply tags to saved image files, choose the jpeg format.

Previous Versions



When changes to a document overwrite a preferred version of a file, or if a file is removed altogether, Previous Versions can be used to revert back to an older version of the document. Versions of files are accessed by going to the properties of their parent folder and

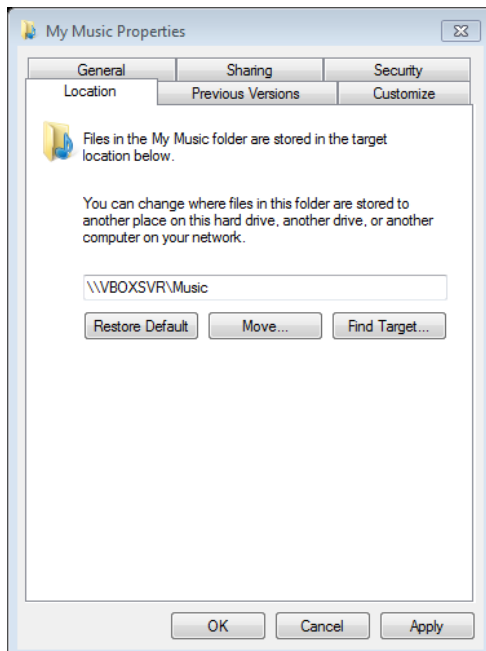
selecting the **Previous Versions** tab. Available versions will be listed in the pane as shown in the image on the prior page. Then, just navigate into the folder to select a file. From there it can be copied to any location in the directory. This function is disabled by default, and is only enabled on a volume-by-volume basis. To enable a volume to support Previous Versions, right-click the Computer icon to go to **System Properties**. From there, go to **System Protection**, select the volume for which to enable protection, and select **Configure**.



Here you will define how much hard drive space is allocated to Previous Versions, and whether or not protection is extended to system settings. Versions are created at one or two random restore points each day, as long as Previous Versions is running and the system is turned on. Manual restore points can also be created at the *System Protection* location.

Redirect Profile Folders

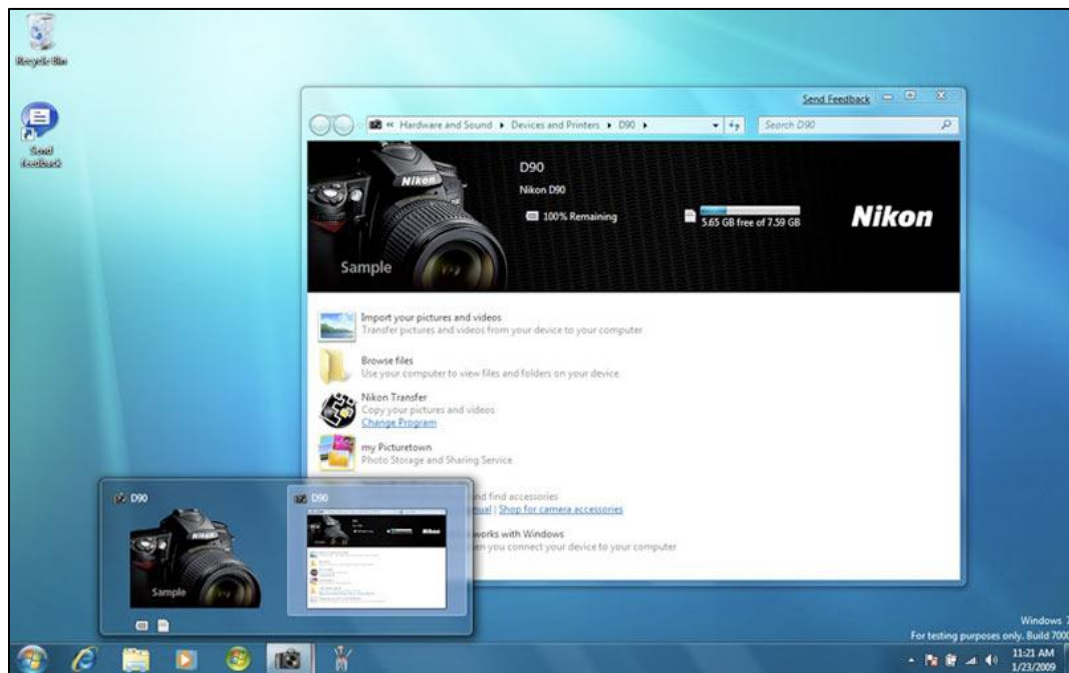
In Windows XP, you had the ability to designate a network location for remote storage for the contents of the *My Documents* folder. Starting with Windows Vista, the *Documents* folder is one of many in the user profile which can now be redirected to any network server



location. By storing files on external server locations, users can conserve local disk space, while aggregating content with other users on servers that have enterprise backup mechanisms employed. This also provides the ability to store files of similar content on the same servers – ie all video files in one location, all music files in another, all documents on another, and so on. To do this, right-click on the profile sub-folder to redirect, and open its properties. Then, from the *Location* tab, define the network path.

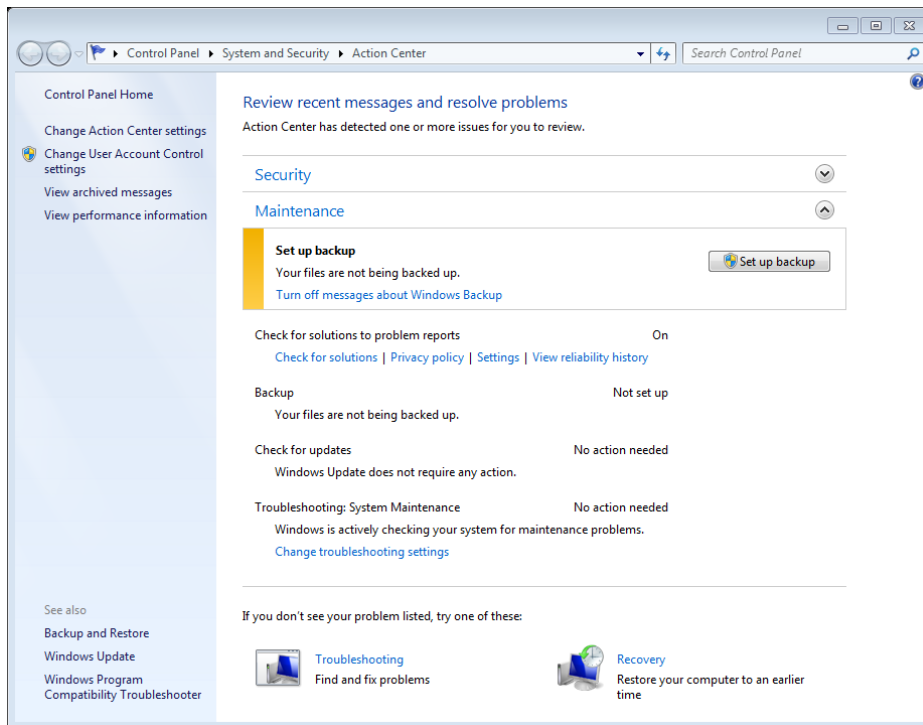
Device Stage

Device Stage represents the next generation of managing and interacting with peripherals and their required drivers. Peripherals are hardware devices, such as printers, that communicate with a computer. For the devices that are compatible with this feature, the resulting graphical interface helps you get the most out of the vendor options for the device. It also helps to keep drivers up to date, which has implications on both the security and capability of the hardware. In the example shown on the next page, you can see how Windows now accommodates an interface for vendor-specific and hardware-specific features and capabilities. In this case, pictures on a connected camera can be browsed and transferred and accessories can be purchased.



MANAGEMENT AND ADMINISTRATION

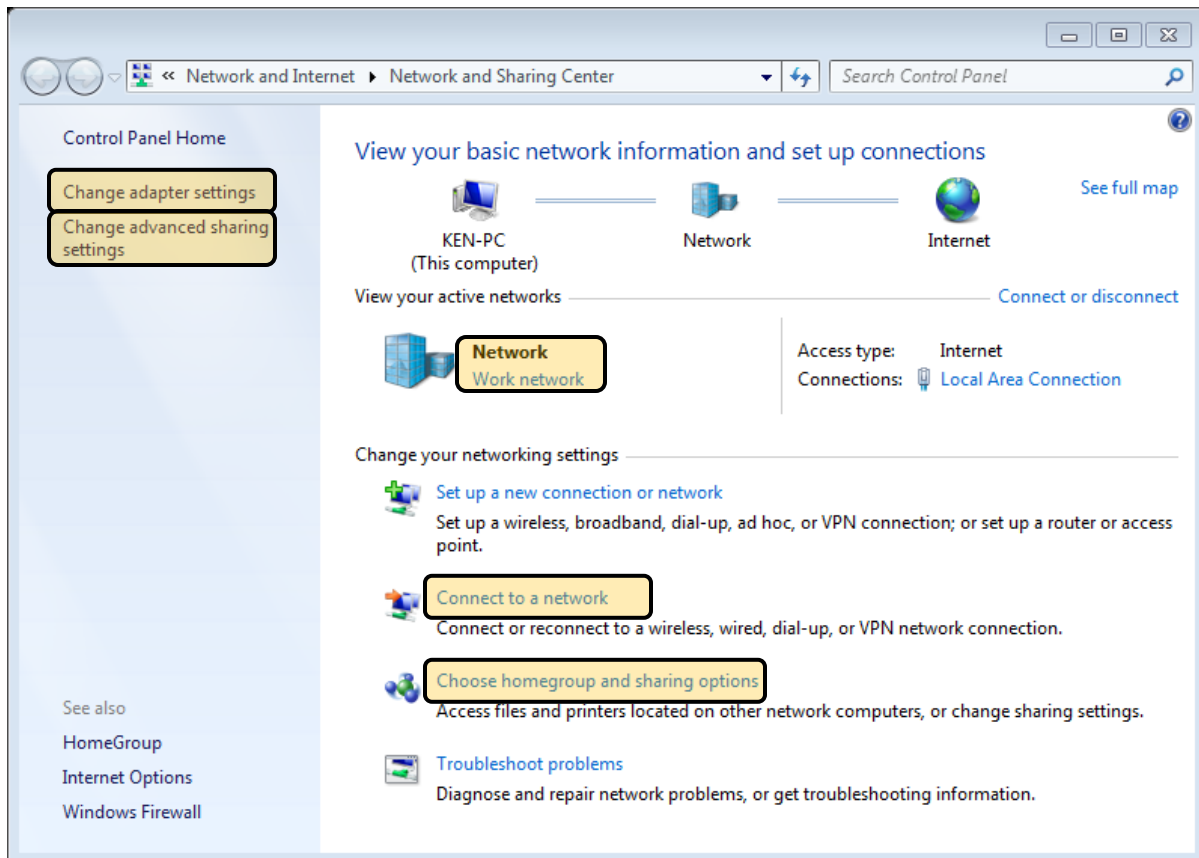
Action Center



The Action Center, displayed above, represents a vast improvement in ease of system management and administration. It is a one-stop-shop for management of anything having to do with security, maintenance, or monitoring of the system. In the figure above, you can see that the Maintenance section has been expanded to reveal several sub-components such as backups and software updating. You can do the same with the Security section, which includes functions such as firewall, anti-virus, anti-spyware, user account control, and others. If any of these requires attention from the user, a notice is provided which can be accessed from a flag displayed in the task tray. Clicking this flag generates a list of clickable actions and a link to open the Action Center. If there are notifications for which you do not want alerts, the Action Center Settings panel on the left navigation can be used to customize those items that should not be monitored.

Network and Sharing Center

The Network and Sharing Center (shown below) provides a single location from which to view and manage anything having to do with system networking or sharing of files, folders, and media. From the *Change advanced sharing settings* link, advanced global options can be configured to enable or disable sharing options such as the ability to scan for wireless networks, the ability to share printers, media, and folders, and the ability manage HomeGroup connections.



Of particular importance is the network connection type. There are three types of network connections: 1) Public networks, 2) Private networks, and 3) Work networks. The image shown above displays a *Work* network. When you connect to a network, you are prompted to define one of these types. *Public* networks are untrusted environments and require a more secure posture. *Home* networks are generally trusted by default. *Work* networks, while managed environments, may pose some threats. Here you can view and change the designated network type. You can also make changes to your network adapter settings using *Change adapter settings* on the left. Using the *Change advanced sharing settings* option, you can configure a variety of ways to share files and peripherals with other users on the systems and on the network.

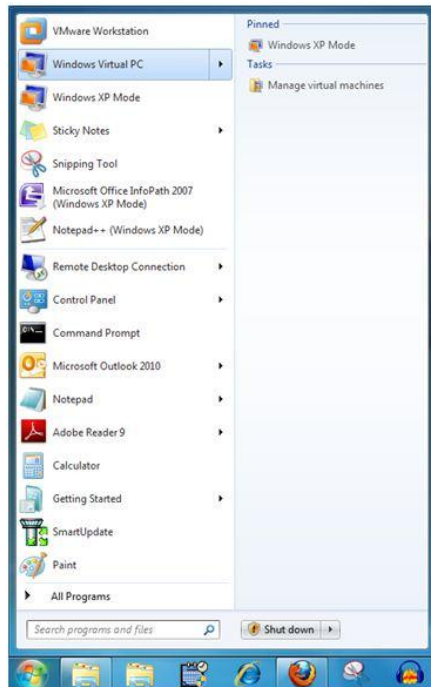
Virtual Hard Drives

Virtual Hard Drives (VHDs) provide a virtual drive contained in a single file. This drive can hold anything that a normal drive can hold, including another operating system. VHDs can be copied to and from other locations, including Virtual PC even VMware guest OSes. Also, system and partition backups are created as VHD files which can be mounted as drives, explored, and files easily recovered. Once a VHD has been mounted, it is available as a drive in Windows Explorer. NOTE: There is no support for the Hibernation or BitLocker functions in VHD-Booted OSes. To create a VHD, right-click the computer icon and select **Manage**. From there, select Disk Management and, from the *Action* menu, select **Create VHD**. You can designate a size for the drive, whether the drive can expand or not to accommodate

additional needs in the future, and a location for the virtual drive. Then, in the disk management console, right-click the disk and select initialize. Finally, right-click the drive again and designate it as a simple volume. You can now mount it as a folder in an existing directory or assign its own drive letter. Either way, you have a volume that can store files and can be easily copied and migrated to other locations.

XP Mode

For software that may not be immediately (or ever) compatible with Windows 7, Microsoft has developed a solution called XP Mode, which includes a licensed copy of Windows XP. XP Mode depends on a free virtualization platform called Virtual PC. Neither of these



applications are installed by default, but they can both be downloaded for free from the Microsoft website. This feature is available only in the Professional, Enterprise, and Ultimate Editions of Windows 7. Programs must be installed while in XP Mode in order to run in under Windows XP, however, the virtual machine does not need to be opened in order to launch a program in Windows XP Mode. Keep in mind that all of the same security precautions should be taken with a virtual system as with the host system (antivirus, patching, etc).

MIGRATION TO WINDOWS 7

System Requirements

Processor: 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor

Memory: 1 gigabyte (GB) RAM (32-bit) or 2 gigabyte (GB) RAM (64-bit)

Disk: 16GB available hard disk space (32-bit) or 20GB (64-bit)

Graphics: DirectX 9 graphics device with WDDM 1.0 or higher driver

Upgrade Methods

1. Upgrade from Windows Vista

Upgrading an existing version of Windows requires that the previous version is Windows Vista. It is not possible to upgrade from XP to Windows 7. A clean install is required in those instances. As with other methods of upgrading, make sure to back up your data before beginning. The *Windows Easy Transfer* tool will make the process of migrating your profiles and settings much easier. Also, while in-place upgrades are not available for Windows XP, the *Windows Easy Transfer* tool is available via separate downloads for Vista and XP. The tool must be run both before installing Windows 7 AND afterwards. Old files will be put in a new location called *Windows.old* which can be browsed in Windows 7 from Windows Explorer.

2. Rebuild Windows XP or Windows Vista

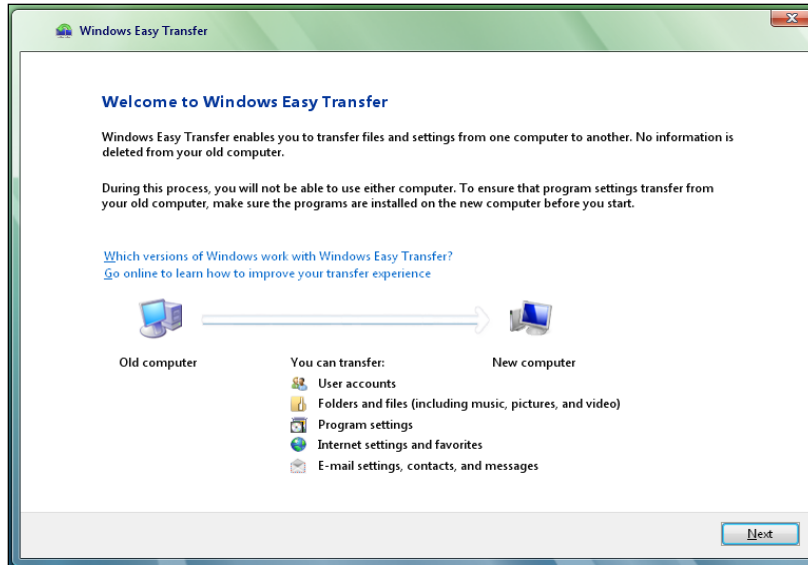
If you decide to do a clean install of Windows 7, bear in mind that you will need to reinstall your existing applications. You will need to make sure that, for any software you intend to continue using, you have installation files or media and registration codes (if applicable). Otherwise, you will end up paying for the software again. Furthermore, you will need to backup your data to an external drive using the Backup Utility. Once the new installation is complete, you can restore the data. Alternatively, you can use the *Windows Easy Transfer* utility to granularly select the profiles (including address books and browser favorites) and directories to be migrated. There are two unique options for free download, depending on whether you are migrating from XP or Vista.

3. Dual Boot

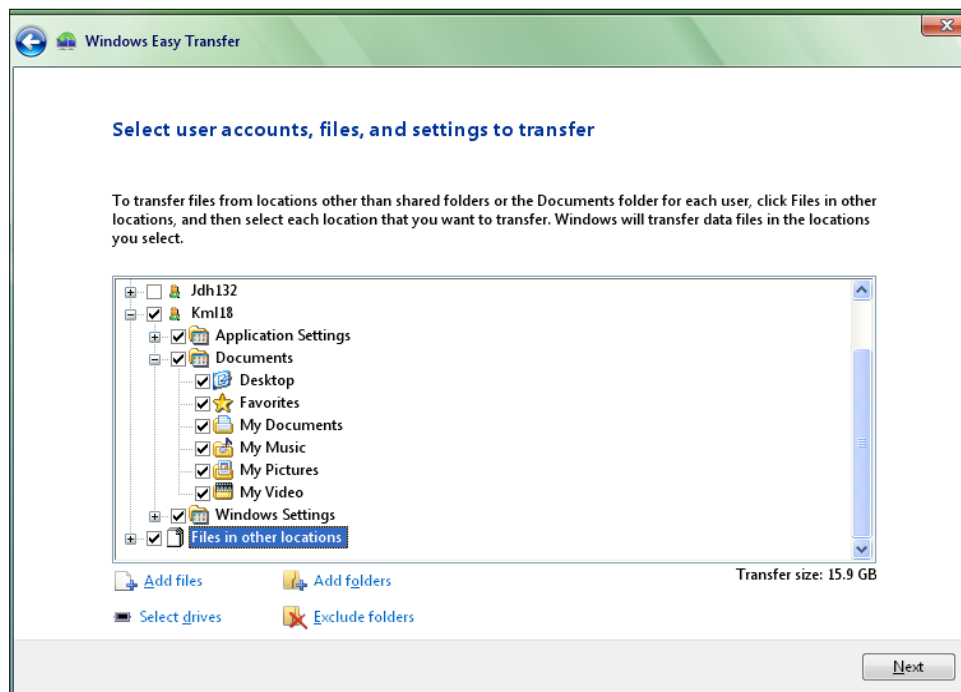
The *Dual-Boot* option gives you the ability to maintain your existing operating system and install Windows 7 in a new partition of the hard drive. It is important to consider that this is an either-or scenario. The operating systems will not function concurrently. Switching from one to another requires a reboot of the system. If you are interested in running concurrent operating systems, you should consider virtualization software such as Virtual PC or a similar product from VMware. Virtual PC is free but it is only included with Windows 7 Professional, Enterprise, and Ultimate.

Windows Easy Transfer

Windows Easy Transfer is a migration utility that assists with the movement of files and settings from one or more profiles on a source system to a new or upgraded installation of



Windows 7. This resource is similar to a typical backup and restore in that it copies existing files and folders and then restores them. Windows Easy Transfer, however, includes profile preferences, system settings, and other environmental considerations that a basic backup and restore does not. Also, with a \$15 Easy Transfer cable, Windows Easy Transfer will perform direct system-to-system migrations.



Upgrade Paths

No Windows XP to Windows 7 Upgrades

Unfortunately, it is not possible to upgrade from any version of Windows XP to Windows 7. A clean install is required. Be sure to back up your data, and have all of your software installation disks and serial numbers prior to installing. Also, you should consider using the Windows Easy Transfer tool to assist with the migration of data from your old platform to the new Windows 7 installation. It makes migration of data and system settings a breeze.

Upgrade Advisor

The Upgrade Advisor is a tool that can be used in the event that someone is considering upgrading to Windows 7 using existing hardware. In light of system requirements it is possible that, while an older operating system worked well, a newer operating system may not perform well. The Upgrade Advisor will scan your system and help you determine whether or not you are best served by upgrading or purchasing a new system with Windows 7 pre-installed.

Upgrade Matrix

The matrix below provides detailed information about which upgrade paths support “in-place” upgrades and which require clean operating system installations. It also considers the version from which and to which the system is upgrading. Note the consideration that is given to 32 and 64-bit architecture.

Upgrade FROM :		Upgrade TO:					
		Windows 7 Home Premium		Windows 7 Professional		Windows 7 Ultimate	
		32-bit	64-bit	32-bit	64-bit	32-bit	64-bit
Windows XP*		Custom Install	Custom Install	Custom Install	Custom Install	Custom Install	Custom Install
Windows Vista Starter	32-bit	Custom Install	Custom Install	Custom Install	Custom Install	Custom Install	Custom Install
	64-bit	Custom Install	Custom Install	Custom Install	Custom Install	Custom Install	Custom Install
	32-bit	In-Place Upgrade	Custom Install	Custom Install	Custom Install	In-Place Upgrade	Custom Install
	64-bit	Custom Install	In-Place Upgrade	Custom Install	Custom Install	Custom Install	In-Place Upgrade
	32-bit	In-Place Upgrade	Custom Install	Custom Install	Custom Install	In-Place Upgrade	Custom Install
	64-bit	Custom Install	In-Place Upgrade	Custom Install	Custom Install	Custom Install	In-Place Upgrade
	32-bit	Custom Install	Custom Install	In-Place Upgrade	Custom Install	In-Place Upgrade	Custom Install
	64-bit	Custom Install	Custom Install	Custom Install	In-Place Upgrade	Custom Install	In-Place Upgrade
	32-bit	Custom Install	Custom Install	Custom Install	Custom Install	In-Place Upgrade	Custom Install
	64-bit	Custom Install	Custom Install	Custom Install	Custom Install	Custom Install	In-Place Upgrade

Version-Feature Matrix

When upgrading systems, the time to select the most appropriate operating system version is at the beginning. The matrix below will help you make the best choice right from the start. Differences begin on the second page.

Feature	What it Allows You to Do	Windows 7 Home Premium	Windows 7 Professional	Windows 7 Enterprise / Ultimate
HomeGroup	Fast networking for media-sharing	X	X	X
Action Center	One-stop-shop for maintenance	X	X	X
Device Stage	Enhanced Driver/Device Support	X	X	X
Remote Media Streaming	Play media from other computers on the network	X	X	X
Bluetooth Support	Connect Devices Wirelessly	X	X	X
Live Taskbar Thumbnails	Preview open apps in taskbar	X	X	X
Fast User Switching	Quickly switch between profiles	X	X	X
PC-PC Networking	Ease of PC networking	X	X	X
Location & Other Services	Systems have awareness of their networking environment.	X	X	X
Windows Mobility Center	Sync content between mobile phone and computer	X	X	X
Aero Glass	Eye candy for Windows	X	X	X
Aero Background	Hi-Res Desktop Backgrounds	X	X	X
Windows Touch	Support for touch-enabled hardware	X	X	X
PowerShell v2	Advanced administration from command line	X	X	X
System Repair Disk Creator	Create system repair tool	X	X	X
ClearType Text & Color Tuning	Fine tuning for display	X	X	X

Feature	What it Allows You to Do	Windows 7 Home Premium	Windows 7 Professional	Windows 7 Enterprise / Ultimate
ISO Burner	Easily burn ISO images to disk without 3 rd party software	X	X	X
Problem Steps Recorder	Record Flash video of steps taken	X	X	X
Credential Manager	Password Vault	X	X	X
Projector Mode Win+P	Fast screen management for projectors, dual screens	X	X	X
Sticky Notes	Color-coded sticky notes	X	X	X
Windows XP Mode	Support for Legacy apps using Virtual PC		X	X
Domain Join & Group Policy	Support for managed domain environments		X	X
Backup & Restore	Advanced Backup Options		X	X
Location-aware Printing	Network context for printing; home, work, public, etc		X	X
Remote Desktop Host	Access system remotely using the RDP client		X	X
Encrypting File System	Encryption at the file level		X	X
Offline Folders	Make server data available when not connected to the network		X	X
BitLocker & BitLocker-to-Go	Integrated whole disk encryption			X
AppLocker	Make apps available to some, but not all users			X
Branch Cache	Single copy of files pulled across WAN, then cached.			X
Multi-Lingual User-Interface Packs	Change the default language of Windows 7			X
Virtual Hard-disk; Booting*	Create, Manage Virtual Disks	*	*	X
Presentation Mode	Control over settings while presenting			X

* Another good list: <http://www.sevenforums.com/tutorials/14422-compare-windows-7-editions.html>

APPENDIX A

- A. 10 Cool Tools in Windows 7:
<http://blogs.techrepublic.com.com/10things/?p=738>
- B. 5 Reasons You'll Love Windows 7:
<http://blogs.techrepublic.com.com/itdojo/?p=1045&tag=rbxccntr1>
- C. DirectAccess:
<http://4sysops.com/archives/windows-7-directaccess-features/>
- D. System Requirements:
<http://www.microsoft.com/windows/windows-7/get/system-requirements.aspx>
- E. Virtual Hard Disk Boot:
<http://technet.microsoft.com/en-us/windows/dd758779.aspx>
<http://edge.technet.com/Media/Boot-from-VHD-in-win7/>
<http://www.sevenforums.com/tutorials/625-boot-vhd-using-windows-7-a.html>
- F. Virtual PC / XP Mode:
<http://www.microsoft.com/windows/virtual-pc/>
- G. Personalization Themes Online:
<http://windows.microsoft.com/en-US/windows/downloads/personalize>
- H. XPS and PDF comparison:
<http://www.novapdf.com/kb/convert-xps-to-pdf-216.html#xps-pdf>
- I. Device Stage:
<http://windowsteamblog.com/blogs/windowsexperience/archive/2009/01/08/device-stage-a-new-way-of-interacting-with-devices-in-windows-7.aspx>
- J. Features:
http://www.winsupersite.com/win7/win7_skus_compare.asp

Technology Training Resources

To look for more advanced sessions of today's training topic visit:

<http://its.psu.edu/training/catalog/>

To browse or register for future technology training visit:

<http://its.psu.edu/training/>

To learn about Training On Demand (sessions upon request for groups of 5 or more) visit:

<http://its.psu.edu/training/ondemand/>

To browse or join in online discussions about technology topics at Penn State visit:

<http://technologytraining.psu.edu/>

To learn about or subscribe to receive training news (RSS) feeds through your news aggregator visit:

<http://its.psu.edu/training/rss/>

To join the Training News List and receive monthly e-mail notification of all upcoming technology training opportunities, send a blank e-mail to:

L-TRAINING-NEWS-SUBSCRIBE-REQUEST@LISTS.PSU.EDU

To find free online books on a variety of popular technology topics visit:

<http://proquest.safaribooksonline.com/>

To explore hundreds of free video tutorials that are available for self-paced learning visit:

<http://its.psu.edu/training/lynda/>

Technology Help Resources

To contact the ITS Help Desk with general technology-related questions e-mail:

helpdesk@psu.edu

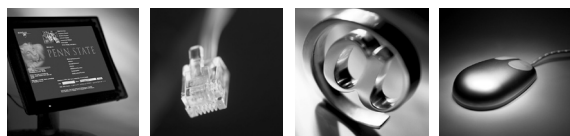
To search for technology-related information in the ITS Knowledge Base visit:

<http://kb.its.psu.edu/>

PENNSTATE



Technology Training Provided by ITS Training Services
23 Willard Building • University Park, PA 16802
Phone: (814) 863-9522 • Fax: (814) 865-3556 • itstraining@psu.edu



Visit the ITS Training Services Web site at
<http://its.psu.edu/training/>