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Windows
Microsoft

[Windows 7 – 20 Features to Make Users Forget Vista SP1/SP2 and XP SP3](#)

Milestone 3 Pre-Beta Build 6801 and Build 6801+

Microsoft is currently moving onward with the development of [Windows 7](#), having passed Milestone 3 with the operating system. According to Steven Sinofsky, senior vice president, Windows and Windows Live Engineering Group, the Redmond company is now cooking the Beta 1 release of Windows 7. But even as early as [Windows 7 Milestone 3 pre-Beta Build 6801 and 6801+](#), discernible details, components and features across the next iteration of the Windows client come with the promise of making users forget all about Windows Vista Service Pack 1 and even SP2, or even Windows XP Service Pack 3.

"We've had a pretty incredible couple of weeks at the PDC and WinHEC. Based on what we talked about you can imagine we are all rather busy as we transition from milestone 3 to beta. We trust many of you are enjoying 6801 (or perhaps we should say 6801+)," [revealed](#) Sinofsky earlier this week.

With Windows 7 pre-Beta Build 6801 changes stretch from the surface to under-the-hood optimizations, with the client evolving from both the perspective of the graphical user interface, user experience and interaction model but also in regard to the actual architecture of the operating system, with repercussions on performance, new capabilities and features, as well as compatibility and support.

The Windows 7 Desktop:

At the Professional Developers Conference 2008 in Los Angeles at the end of October, Chaitanya Sareen, a senior program manager for Microsoft, delivered a session in which he emphasized the evolution of the various elements on the desktop from Windows Vista to Windows 7. Sareen was already running a Windows 7 development milestone higher than Build 6801, namely Build 6933, which, of course, is still in pre-Beta stage. The entire presentation packaged as a WMV is available for [download via this link](#).

According to Sareen, the key goals with the [Windows 7](#) desktop include: "things you use all the time are at your fingertips - it is easy to get the programs and destinations you use all the time, with less mouse movement and fewer clicks. Manage your windows with confidence - you can switch to the right windows quickly without mistakes and effortlessly position windows the way you want them. You are in control - the desktop reflects your style; you get to personalize the experience, choosing what is important to you, including how and when you receive notifications. Clean and lightweight - the desktop experience feels organized, light, open and is a pleasure to use; visuals and animations are delimiters the first time and every time."

Windows 7 desktop elements:

1. The new Windows 7 Taskbar (the Superbar) - the Quick Launch area is gone, the Show Desktop button was moved all the way to the right hand side of the taskbar, and the entire space dedicated to housing opened programs can now be used to manage both launched applications and IE tabs, but also shortcuts to the most used items across the operating system.

2. Aero Peek - the way to switch windows without actually switching windows. Working in conjunction with the new Windows 7 Taskbar, Aero Peek is designed to highlight a single window corresponding to the mini-window that the user focuses on with the mouse on the thumbnail of a specifically opened desktop item.
3. Windows 7 Taskbar Thumbnails - even in pre-beta Build 6801, the thumbnails for opened programs in Windows 7 are interactive. Unlike Vista, in Windows 7 users will be able to click thumbnails in order to access a specific opened application or window, to sneak (Aero) peek at the content, to close an item on the desktop, and even to run basic commands such as play and pause for Windows Media Player.
4. The Start menu and the mini Start Menus (Jumplists) - Microsoft has obviously revamped the Start Menu in Windows 7, from the search functionality to simple pin program actions. At the same time, the company will offer mini start menus, also called Jumplists, for each Taskbar item, allowing the user to jump directly to the tasks performed with a certain program, rather than executing the application and only then navigating to the task, be it a web page for Internet Explorer or a document for Word.
5. Overhauled notification area and the Action Center - those pesky and nagging notification balloons in the bottom right hand side of the screen will be a thing of the past in Windows 7. The successor of Windows Vista will allow end users to control notifications via the Action Center.
6. AeroShake - a feature locked in Windows 7 pre-Beta Build 6801, which allows users to control opened windows with mouse or touch gestures. Desktop items can be minimized or maximized by grabbing a window and shaking it.
7. DesktopSlideshow - is a feature designed as a combination between traditional static wallpapers and DreamScene animated backgrounds. It will allow users to have an image slideshow as their background.
8. New fonts - Windows Vista came to the table with Segoe and Windows 7 will deliver Gabriola, a new font.
9. Windows Sidebar is no longer a sidebar - the feature continues to exist in Windows 7, but it is no longer associated with the bar placed on the right hand side of the screen. In Windows 7 gadgets don't have a dock anymore, and, just as in Vista, they can be placed all over the desktop.
10. The Windows Ribbon graphical user interface - Microsoft is attempting to change the old approach to GUI designs as it has become traditional in Windows, with a move to a new style introduced with the Office 2007 System. The company already introduced the Ribbon GUI in applications such as Paint and Wordpad but it is looking to convince developers to do the same for all third-party applications designed for Windows 7.

Windows 7 under-the-hood:

1. New installation process - [Windows 7 pre-Beta Build 6801](#) comes with a tweaked installation process that automatically deploys the Ultimate SKU of the operating system. This could, of course, be a preview of Microsoft simplifying the number of Windows versions, but it is still too early to tell, and the company has not confirmed anything officially in this regard.

2. Faster boot - Microsoft has already demonstrated that the [Milestone 3 of Windows 7 will boot faster than Windows Vista](#) by a few seconds. It is only to be expected of the Redmond company to take startup performance to the next level with the forthcoming version of the Windows client.
3. MinWin - Windows 7 does not come with a new kernel, and it is in fact delivered as Windows version 6.1, whereas Vista is 6.0, but what it does come with is an isolated core. End users will not be able to see this, but Microsoft will, from now on, separate the development and innovation of the Windows NT kernel plus a limited number of core-components, labeled collectively as MinWin, from the rest of the operating system. This is known as componentization.
4. Support for over 64 processors and scaling up to 256 processors - "In the Windows 7 operating system, the 64-bit kernel supports more than 64 logical processors. To scale up to support this expanded number of processors, some applications and Windows kernel-mode components require modification," Microsoft stated.
5. Touch capabilities - Windows Vista offered a preview of things to come in terms of touch computing with the integration into Microsoft Surface. With Windows 7 the Redmond giant is simply taking Windows touch one step further. Windows 7 will come by default with a Natural User interface based on touch and gestures designed to work with the latest hardware technology, already integrated into computers sold on the market.
6. Cloud Integration - Windows Essentials - Windows 7 will no longer come with a range of applications bundled by default into its fabric. Instead, the operating system will reach into the cloud to grab applications such as an email or an instant messaging client.
7. Windows 7 Driver Verifier - "Driver Verifier monitors kernel-mode drivers to detect incorrect function calls or actions that might corrupt the system. For Windows 7, Driver Verifier has several features that did not exist in earlier versions of Windows, that detect new classes of driver defects, and that provide information for debugging these driver defects. This paper provides a preview of the Windows Driver Kit (WDK) documentation for these enhancements. Exposing these additional classes of common driver bugs assists driver developers in producing higher quality device drivers," Microsoft revealed.
8. Home Groups - with Windows 7 Microsoft has made it easier for computers in the same Home Group to share pictures, music, videos, documents and devices.
9. Windows Sensor and Location Platform - Windows 7 will know where users are; here is how Microsoft explains it: "The Windows Sensor and Location platform, which is new for Windows 7, enables your computer and applications to adapt to their current environment. With location sensors - including GPS devices, WWAN radios, and even triangulation technology - your applications and gadgets can know exactly where they are, enabling them to provide more locally relevant content and functionality."
10. Windows 7 Troubleshooting - Windows 7 brings to the table enhanced troubleshooting capabilities compared to Windows Vista. The next version of the Windows client will be able to resolve issues related to programs, devices, networking, printing, display, sound and performance.

[Mark Russinovich: Inside Windows 7](#)