A CMP GUIDE

THE BUSINESS-CRITICAL PC

Business-Critical PCs for SMBs:
The New Usability

When users are more **comfortable** with their computers, they are more **productive**. So say many of the 3,000 IT and Solution Provider Pros in CMP's global survey, who emphasize that ease-of-use benefits are key criteria for PC hardware and software purchases.

Top Usability Tech Issues

- **85%** of SMBs say networking capabilities are most important
- **60%** say storage functionality is a key factor
- **41%** say printer connectivity is a consideration

INSIDE

Go to www.businesscriticalpcs.com for survey data, more deployment advice and in-depth SMB technology information.

"With Windows XP Professional's networking and hibernate features (running on a Tablet PC), I never have to reboot."
— **Greg Sullivan,**
Lead product manager
Microsoft Windows XP

"The HP convertible mini-tower makes cabling easier for me and gives the user a sense of empowerment."
— **Henry Dumas,**
Senior IT consultant

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THE **FREEDOM TO ROAM** WITH ELEGANT WIRELESS TABLET PCS… THE **FREEDOM TO CONFIGURE** YOUR DESKTOP HARDWARE HOWEVER YOU WANT - ITS THE NEW USABILITY. USERS ARE MORE PRODUCTIVE AND EFFICIENT WHEN THEY ARE **COMFORTABLE** WITH THE DESIGN AND FUNCTIONALITY OF THEIR DESKTOP AND MOBILE COMPUTING DEVICES.

By Steve King

As PC users in small and medium businesses spend more and more time at the keyboard, ease-of-use issues become increasingly business-critical. The importance of ergonomics, form factors and similar "user-facing" issues can be summed up simply: When users are more comfortable with their computers, they are more productive. In research for this article, we found that ease-of-use benefits are equally important in both hardware and software realms. For instance, the quality of a PC operating system's user interface and its "look and feel" can actually have a huge impact on the comfort and productivity of users.

MOBILE EASE OF USE IS READY TO GO

We surveyed 3,000 IT professionals worldwide to find out what desktop and mobile PC computing issues are most important to today's small businesses. The top issue was networking. But in follow-up interviews with our survey respondents, it became clear that networking means a lot more than just connectivity. Now that networking is relied on by a wide range of mainstream business users on a wide range of platforms, the ease-of-use issues and ergonomics of networking come to the fore, particularly for mobile users attempting to use wireless networks.

One of the best ways to help ensure ease of use for mobile users is to take advantage of the enhanced networking functionality in Microsoft® Windows® XP on laptop and Tablet PCs. Windows XP enhancements to underlying IP and network protocols are the foundation for new network autoconfiguration features that let users move seamlessly from office to home to public wireless networks without stopping to reconfigure IP addresses, network interfaces, logins, etc. When the network autoconfiguration services are combined with other Windows XP features (such as the enhanced suspend, hibernate and resume capabilities), users can move with notebook or tablet PCs from home to work to public wireless nets without rebooting, reloading applications or losing their work state—which is a real improvement in ease of use and productivity over past generations of mobile PCs. With the Tablet PC, advanced Microsoft technologies enable you to write and store information in your own handwriting and easily convert your notes into typed text for use in

*Greg Sullivan,
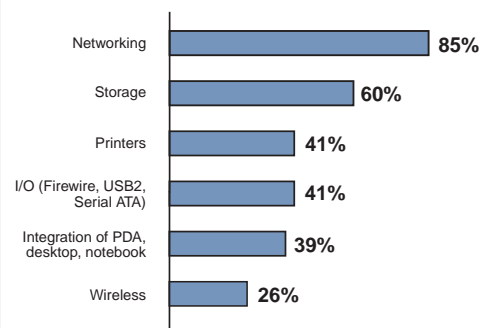Lead Product Manager, Microsoft Windows XP*

other Windows XP-compatible applications. Real estate agents find this capability of particular use, as inspections can be completed on the spot. While doing property management work, with the HP Compaq Tablet PC agents can do an inspection, take pictures, import them into Journal [on the Tablet PC] and notate directly on them. Plus, the added benefit of having clients and potential clients see agents using this new piece of technology can enhance the business relationship.

Greg Sullivan, lead product manager for Microsoft Windows XP, gives his version of the seamless mobility experience: "It used to be when I was at home during a busy period, I would have to interrupt my leisure time to keep checking my desktop computer for mail and messages in case something critical popped up at work. Nowadays I have a wire-

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Business-Critical PCs for SMBs: The CMP article series and online knowledge site. *In this series we look at a key set of evaluation criteria that can improve the outcome of the PC selection process for desktops, notebooks, tablets and Pocket PCs. This print-and-online special project, sponsored by Hewlett-Packard and Microsoft, is supported by a major research study conducted by Roper/NOP, and a custom Web site located at:* **www.businesscriticalpcs.com**

Top Usability Tech Issues

Networking	85%
Storage	60%
Printers	41%
I/O (Firewire, USB2, Serial ATA)	41%
Integration of PDA, desktop, notebook	39%
Wireless	26%

Source: Roper/NOP

less tablet running Windows XP Professional that I can use around the house for mail, messaging and Office, as well as personal applications—like my fantasy baseball league standings." Whether a person is at a desk, on the way to an appointment, giving a presentation, taking notes in a meeting, or in the middle of a cross-country airplane trip, the Tablet PC mobile versatility makes it easier to do whatever he or she needs to accomplish.

Greg goes on to explain the seamless nature of his tablet experience at home, work and on the road: "The tablet frees me to go wherever I want while never losing touch. With Windows XP Professional's networking and hibernate features, I never have to reboot. I just pick up right where I left off, even when I'm in a new location. Tablet PC's lightweight design and longer battery life help when managers are on the road as well. The network, my applications and my data are always right there, ready to go." The fast pace of today's SMB managers was key to the QuickLook for HP Compaq Tablet PC feature in the Tablet PC. Instead of waiting one to three minutes for your PC to start up, you can access the calendar, contacts and task information from OFF within 10 seconds. The Compaq Tablet PC is a convergence of the notebook and handheld computing. This free, optional download enhances the computing experience.

A TASK-ORIENTED **INTERFACE**

As the design and usability qualities of PC hardware have advanced, so have PC operating software environments. With earlier versions of Microsoft Windows, when users had a lot of files and applications, the desktop, Start menu and taskbar got crowded and difficult to navigate. OEM PCs installed with these older operating systems would often start out with 50 or more icons on the desktop.

The design of Microsoft Windows XP Professional and Windows XP Tablet PC Edition specifically addresses usability issues by creating

a simpler and much more streamlined user interface with less clutter and more-meaningful choices. The Windows XP Start menu, file explorer and control panels are "task-oriented" and "context-sensitive," a feature that automatically controls the number of menu and file system items that are displayed. This simplicity and literally hundreds of other user-interface improvements throughout Windows XP make it possible for SMB users to do their work more comfortably and productively in a very wide range of applications.

Product manager Greg Sullivan explains how this was achieved. "In the process of designing Windows XP, one thing we learned was that the vast majority of users regularly use only a small percentage of installed programs and services. A user may have 50 or even 100 installed applications, but typically uses only 15 or less."

Another thing that Microsoft researchers learned is that users of earlier Windows products kept adding levels of icons and folders to their Start menus, which eventually involved too much scrolling and cascading to get to programs and resources. Based on these and other findings, the Windows XP design team created an interface that greatly reduces clutter by intelligently focusing on the core 10 percent or 20 percent of applications and tasks that users actually execute on a daily basis. These are what dynamically appear on the Start menu. Other, less-often-used menu selections are still available, one step off the main Start menu in the "All Programs" menu.

Henry Dumas,
Senior IT Consultant

Henry Dumas, a senior IT consultant and SMB veteran based in Springfield, Mass., gives his perspective on the XP interface: "I like the way the Windows XP Start menu automatically shows the most recently used applications. Everything used most often is right there: Control Panel, My Computer, My Recent Documents. Users no longer need to clutter their desktop with shortcuts. I use Windows XP Pro at work and at home, and I do not want to go back to older versions." Dumas is not alone. Tablet PC specifically makes tasks easier with its advances that make reading from your computer easier and more comfortable. A high-resolution display and use of ClearType technology make it easier and less tiring to read directly on your Tablet PC. In addition, its lightweight design, longer battery life, and flexible screen orientation—in either landscape or portrait view—give you more options for comfortably reading text on the screen.

FORM-FACTOR **FEVER**

Hardware ease-of-use issues can be equally important in terms of user comfort and productivity. The recent explosion of small form factors and ergonomic PCs is testimony to this. At the 140-year-old Richmond, Va., law firm of Sands Anderson Marks & Miller, users enjoy the environmental and ergonomic advantages of small form-factor PCs and TFT monitors. In addition to performance, the size of the PC is a key selection factor. Donna Konseck, director of information systems, explains: "We felt it was important to maximize the use of our desktop space. We have custom cubicles, and our old PCs monopolized the space." On the advice of local HP reseller SyCom Technologies, the law firm purchased more than 100 HP D510 small form-factor PCs and Compaq flat panel monitor TFT units. "The flat-panel monitors and super-small form factors save so much space in the lawyers' offices," Konseck says. "In addition, they can actually move these PCs around their offices without having to call IT

Shaun Hobbs,
Senior Category Manager
HP

for help. They just love them."

For companies looking for very small footprints without sacrificing PC power or features, the HP Compaq d530 ultra-slim desktop delivers big-league PC functionality in a chassis that is about one-fifth the volume of a conventional minitower—roughly the size of a standard unabridged dictionary. In spite of its extremely small size, the d530 ultra-slim desktop includes a high-end Intel P4 processor, integrated gigabit LAN, six USB ports, a PCI slot and Intel Extreme graphics, plus an internal and an external drive bay.

Shaun Hobbs, HP's senior category manager for commercial desktop PCs, HP, U.K., describes the creation of the ultra-slim desktop: "HP engineers found that it was an interesting engineering feat to put a PCI expansion slot and a full-power motherboard in such a small and easy-to-service system." The multibay drive in the d530 ultra-slim desktop can be removed by users and put into another multibay-capable system or into an HP laptop with multibay capabilities, allowing for great flexibility in the way data is shared. To help ensure the quality of environmental and ergonomic factors in its products, HP employs over 50 human-factors engineers with a total of more than 400 years of experience and backgrounds that range from psychology to industrial engineering. Their sole purpose is to

Integrated Work Center

enhance HP's capabilities to design and compelling customer-centered products, services and solutions.

For SMBs that need maximum PC deployment flexibility, the HP Compaq d530 series is also available in a convertible minitower form factor that works equally well as a vertical tower or a horizontal desktop system. The significance of an adaptable form factor is described by PC usability maven Henry Dumas: "The HP convertible minitower has made life easier for me. When I replace a mixture of old PCs, I explain the pros and cons of desktop versus tower, and I offer each user a choice. The HP convertible minitower adapts easily to both horizontal and vertical configurations, which makes cabling easier for me and gives the user a sense of empowerment."

Looking forward, another important HP innovation is scheduled to arrive this autumn. The Integrated Work Center form factor combines a d530 ultra-slim desktop PC with a TFT display in a highly versatile, integrated "pedestal" package that adapts to a large number of office and customer-service applications. The Integrated Work Center is a unique form factor that allows the display to swivel to a wide range of positions while remaining tied to the system unit. The footprint is very small, and—when not in use—the keyboard can be stored under the monitor on the base of the pedestal. The whole system unit, pedestal and display can be latched and locked into a single secure unit, which is suitable for a wide range of customer service, finance and retail applications.

In addition to form factors, noise and heat can affect users on a daily basis. Well-designed PCs, such as the HP Compaq d330 and d530 series business desktops, control noise in several key areas, including disk drives, CPU fan and heatsink, power supply, system board, add-in PCI and AGP cards, and chassis. HP business desktop PCs are designed to be as quiet and cool as possible.

Clearly, improvement in usability and ease of use is an ongoing process. Look for additional innovations in form factors, user interface and ergonomic features in the near future. And for today, SMBs that actively understand and pursue evolving PC-usability features can realize major benefits in terms of a higher-quality end-user experience and more-efficient business operations.

Steve King is a London-based technology consultant who has deployed PCs and IT systems for more than 100 government agencies, universities and companies.