

Windows XP Professional and Home Edition: Massive Improvements

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Giga Position

Giga has been analyzing Windows XP while in production and, although there are still issues with this new operating system (OS), we find it substantially improved over previous versions of **Microsoft's** operating systems. The driver for this change is a renewed personal interest in the customer experience, and the result is a set of adjustments that may be small individually but when taken collectively are quite compelling. Initially, as with virtually all of Microsoft's new operating systems, there will be issues, but because this OS can dynamically update itself before it installs, the problems should drop more sharply over time. Overall, if these improvements are indicative of what is to come, Microsoft may have strategically done a lot to improve its image — simply by focusing on customer needs and building a product that better matches those needs.

Proof/Notes

Windows XP, backed by the most expensive launch in the industry's history, comes at perhaps the worst time in that history to launch a product. With various governments criticizing Microsoft, recent license changes and a turbulent geo-political scene, the drama is that this is, by far, the best OS that Microsoft has ever developed, but will likely be overwhelmed by current events. Traditionally, new Microsoft OSes are bought if it fixes something you need fixed and left alone if it doesn't. While timing is important, this OS fixes something for everyone, even Windows 2000 users, making it worth considering in virtually all cases. This is clearly a change in recommendations; however, in looking at the problems organizations have been reporting during the last 18 months, this product goes farther to address problems relating to the desktop than anything else, hardware or software, that we can recommend.

Requirements for the XP

Much of the cost associated with both the deployment of new hardware and the maintenance of that hardware is associated with image management, migration, system restore and networking issues. These problems can, and often do, eat up an excessive amount of resources and form the foundation for the astronomical ownership costs that many companies incur on desktop hardware and software. Because Microsoft is focusing initially on the consumer market and was afraid of causing a delay in Windows 2000 deployment, the most powerful IT benefits of XP have not been communicated widely. However, based on our experience, there are real and tangible benefits to this product.

Additional requirements resulted from the Sept. 11 terrorist attacks regarding communications functions, e.g., instant messaging worked when phone calls could not get through. In addition, news events subsequent to that date had increased the concerns about system security, and the primary source of related exposures were the untimely application of operating systems and browser patches that, for the most part, prevented some hacking attempts.

The baseline requirements for a new operating system remain in place, such as better performance with current-generation hardware. Operating systems have traditionally lagged hardware improvements, which was one of the primary reasons for a new OS — to better map to current-generation hardware. Windows 95, 98, 98SE and ME were all well out of date with current-generation hardware support. Companies deploying those products were reporting increasingly high breakage rates due to the highly modified versions of old

OSes they were forced to use and the large numbers of images they had to manage.

Distinct improvements to problem areas: For Windows 2000, faster boot times, broader hardware support, improved wireless networking support and a higher degree of commonality with what employees were using at home. For Windows 98 SE (Windows ME did not sell well), these improvements included security, reliability, performance, improved ease of remote management and an updated user interface.

Value: An OS, and any product purchase for that matter, has to be seen as costing in line with or less than its value. No product that is perceived to cost more than it is worth sells well. Meeting this requirement has become increasingly difficult for Microsoft, due to the rapid decline in hardware prices.

Creating the Improvement

There are two key drivers that differentiate Windows XP from previous products:

1. The most obvious driver is that there was a clear need to converge the Windows code base. NT, which represented the most robust and advanced core platform that Microsoft had, needed to be updated and then combined with the 9x code base, which makes up the majority of the PC market today. This second platform, particularly the older versions, is also the source for many complaints that surround Microsoft's products and remains one of the biggest impediments to Microsoft .NET products.

Building on this, Microsoft needed a platform that would better link the services it anticipated in .NET; if the base had largely noncompliant older browsers and operating systems, it would be difficult, if not impossible, to sell the .NET back-end products and solutions, which would severely hamper Microsoft's future growth, if not eliminate it.

2. Finally, Windows, or more accurately, the Windows 9x generation of the product, was a hybrid and hybrids are traditionally problematic and unreliable. This 9x product line, particularly the first (95) and last (ME) versions, was excessively prone to failure, security exposures, legacy hardware problems and, as a result, was seen as being of extremely poor quality. Since this product is the most widely distributed, the impression it created was tied back to Microsoft's image and founded the belief, for many, that Microsoft builds poor quality offerings. This belief provided a substantial foundation for an argument against purchasing Microsoft products. To increase the sales opportunities of those products, the problem needed to be corrected. A bad experience with Windows 2000 by one of Microsoft's top executives during the early creation of Windows XP started a high-level drive to make XP vastly better. The lack of a focused drive to improve user experience had been identified as one of the top causes for disappointing products from Microsoft and other companies as well.

The Results

Windows XP does a better job of meeting the defined needs than any previous Microsoft product. You can clearly get a list of improved features from Microsoft; however, there is a series of attributes that, initially, make this product preferred and more will emerge over time. The immediate benefits clearly have to map to the following needs:

Image management: Windows XP should allow an enterprise to substantially reduce the number of images it has to manage; indeed with solutions like **IBM's** Image Ultra, you may be able to get down to one image, substantially reducing the cost and complexity involved with servicing personal computers. This is due to Windows XP being better designed for imaging. **Symantec** Ghost remains the leading imaging product.

Migration: The preferred way of moving a user from an old machine to a new machine is migration. Windows XP is the only Microsoft OS that has migration tools built in. As a result, it is far easier to migrate a

user from one machine to another. **Altiris**, which is resold by **Compaq**, is the most comprehensive third-party migration product in the market.

System restore: A common problem with PCs today is the nasty habit users have for changing settings or installing unapproved software, which results in hard-to-diagnose problems. This often creates the need to re-image the PC, which has an adverse impact on both the users' productivity and the relationship between line and IT organizations. Windows XP improves on Windows ME's system restore capability, which allows the system to return to a state where it was working properly. This dramatically cuts both the repair time and the aggravation of the user with the IT organization (not to mention the aggravation the IT organization feels toward the users).

Networking: XP does a much better job of discovering networking resources, and improved wizards make it far easier for remote users and consumers to install. However, the biggest improvement is with 802.11 wireless networks. Previous operating systems needed third-party applications to work in wireless networks, and these were difficult to set up and anything but consistent. In addition, you generally had to run down the SSID (the name of the access point) before the software would even see it and allow you to log on. Windows XP has internal support that is consistent across vendors and it automatically identifies local access points, making it vastly easier to set up and use — particularly when the user is connecting to a public 802.11b network or hoteling. Of the cards we have tested, the **3Com** card (due to its retracting antenna) is the one we prefer. Currently, internal 802.11b card drivers have not been completed, and many of these products will either behave badly or not work at all (often both). This will be corrected when updated drivers show up in approximately mid-November. (The delay was at least partially due to the near shutdown many companies experienced as a result of the Sept. 11 events.)

Additional features that have been made more important by recent events include the following:

- Improvements in the update process: Most of the security exposures we have been tracking are exposures because individuals and companies do not keep their products current. The new Windows Update feature operates in the background, includes drivers and is far less obtrusive (and far more likely to be used) than its predecessors. This alone, given the proliferation of platform attacks, could justify this product to some buyers today.
- Communications: During and shortly after the attack on Sept. 11, phone systems exceeded capacity and people were unable to make contact over the phone. However, instant messaging was functioning and Microsoft's offering, given that the interoperability between vendors continues to be the major problem for this kind of technology, is one of the more advanced and comes as part of this package.

Baseline Requirements for Microsoft XP

Performance: The product is clearly tuned for the current generation of hardware, with testing by **eTesting Labs** (www.etestinglabs.com) showing a 36 percent to 40 percent performance improvement over Windows 9x products and dramatically faster start and shutdown times than with Windows 2000. (The latter is particularly noticeable for notebook users.)

Improved hardware support: Unlike Windows 2000, which was only supported on a relatively small subset of old and new hardware, the hardware support for Windows XP, while not as broad as the Windows 9x products, comes close — particularly when you take into account a compatibility mode feature that can address software issues with many legacy offerings.

Commonality: The home and business versions of the product work and act with a great degree of similarity, as you would expect given their common roots. This should assist with employee affinity programs and make it easier for employees to move between home and work environments while maintaining adequate competence with both versions. In effect, employees really don't have to remember much because, to them,

the products are nearly identical. From Microsoft's perspective, this, over time, cuts the support costs in excess of 50 percent because the products are of a newer and easier to manage generation, are easier to support due to new features like System Recovery and they eliminate diversity, which drives costs. Corporations that do internal support and deploy this offering should see similar benefits more quickly because they control the deployment rate, while Microsoft will have to wait until people migrate to the new platform to enjoy the cost benefits.

Remote management: In addition to the System Restore and System Migration features discussed above, Windows XP has enhanced remote control capability that, while not as robust as dedicated offerings like Symantec's PC Anywhere, may be adequate for most service needs.

Value: Value remains a problem area because the market clearly does not like to see an operating system that costs more than 10 percent of the overall platform, and, with hardware selling at \$600, Windows XP Professional represents an apparent 50 percent cost on that hardware. Fortunately, hardware OEMs and large corporations do not pay that price, making preloaded \$600 hardware one of the strongest values in the market today and continuing to validate the need for volume license agreements with Microsoft. Still, for the midrange and consumer markets, Microsoft's pricing is likely to create a drag on sales, and Microsoft's pricing strategy for this offering is appearing more and more counterstrategic. The existing pricing model, resulted from early NT pricing, targeted a premium workstation market, and the use of two versions, upgrade and full, provides extra aggravation for those users trying to recover from a catastrophic failure or who like to build their own machines. This latter class, which we call tuners, is generally the most active in forums and is generally viewed as localized experts. Upsetting this group over and over again seems incredibly foolish.

Problem Areas

Office XP: One of the clear mistakes that Microsoft made, which is now coming back to haunt it, was the decision to release Office XP before Windows XP. This not only created confusion, which generally adversely impacts demand, but resulted in a mismatch between the products. Of the applications Giga uses regularly, Office XP, particularly Outlook, has been the most unreliable. Even the migration tool, which seems to otherwise perform adequately, seems to have a problem with the Outlook version in Office XP. While this is easy to fix, it still aggravates users.

Driver support: While some vendors, like **Creative Labs**, 3Com and **NVIDIA**, have stepped up to the plate and done a stellar job of taking care of customers during both the beta cycle and the launch, others, like **ATI** and **Hercules**, have seemed to go out of their way to provide poor support. So far, this is reflecting more on these vendors than Microsoft (as it should), but it does create problems for early adapters of this OS nevertheless.

Even though a number of current drivers will be available at launch, most don't appear to be part of the Windows Update process, making it far more difficult to do the operating system upgrade. It forces users to hunt down updated drivers and invalidates one of the more powerful new features of this product.

Marketing: While not a product feature, the delay in the marketing campaign due to recent events in the consumer market and the lack of any real campaign in the corporate market will create what likely will be seen as the biggest reason that sales do not meet estimates. As the market continues to degrade, presales and in-place corporate budgets would have provided a significant boost to deployments. But without a campaign, presales have been dismal and most corporate budgets do not take this product into account. The launch itself was largely dull and uninspired, although it subtly connected US patriotism to buying PCs. While not as bad as the Windows 2000 launch, which still represents one of the worst launches ever, this one did very little to showcase the product and get people excited about it. Under current market conditions, consumers needed a very powerful launch. This wasn't it.

Upgrade process: Unless you are imaging or buying new equipment, the upgrade process can be very time

consuming. Because you have to enter information mid-upgrade, you can't, as an individual, do an unattended upgrade (you can script this or use imaging software if you are a corporation). This is a problem that has moved from product to product and still needs to be addressed. In addition, while the migration feature is clearly an improvement, it is not intuitive and it takes a long while to execute (fortunately, it does work largely unattended). As drives get larger and filled more quickly, finding a faster way to upgrade will likely be one of the tasks of those developing Longhorn, the next version of Windows.

Hardware configuration: XP performs poorly on machines with less than 256M of memory, and while memory is incredibly inexpensive, upgrading memory is unfortunately not trivial. With memory manufacturers having financial problems, we have run into an increasing number of bad memory modules that can destabilize any system and are often difficult to diagnose. If you do upgrade memory, make sure it has been **Intel**-certified or carries a brand you trust.

Government action: The US Department of Justice and the Attorney General's Office clearly have Windows XP in their sights and appear to be on a track that could force a recall of this product or some other significant change. Any major action like this would clearly slow sales. This pressure is not expected to let up, and we continue to expect a decision impacting this offering in particular early in 2002.

Alternative View

2003 represents the next best window for a major OS upgrade. During this year, we expect a market recovery in which IT organizations will have more money to spend. Much of the hardware that was purchased in preparation for Year 2000 (Y2K) will be due for replacement and you will, in most cases, be better able to justify both the hardware and software upgrade. The PC platform goes through its most massive change in terms of eliminating existing bottlenecks, which should result in a five to 10 times performance increase over today's machines. And the next version of Windows will be out, which will better address some of the then emerging wireless technologies and this new desktop hardware. Finally, this platform should be more long lasting than the current one because it comes at the beginning of a major change, not at the end of the last one. Overall, 2001 to 2002 is likely the worst time to do a major upgrade. While it certainly will be worthwhile to let new hardware come in with XP on it, the likelihood that you will need new hardware is substantially reduced if you are in the process of downsizing or trying to avoid layoffs. Hardware prices are incredibly low, but much of this hardware is about to become obsolete, and, thanks to Y2K, most of you are off-cycle anyway. Regardless of how good this product is, 2003 may be a better time to make a major change like this.

Findings

Windows XP is arguably the best product Microsoft has ever released, with key improvements in a number of areas critical to both the consumer and corporate markets. For corporations, it is the ".1" release of Windows 2000, making it the natural favorite for business buyers because .1 products have traditionally been easier to use, more reliable and higher performing. This product is no exception to the rule. For consumers, this moves them out of the DOS years and into the current decade in terms of technology. On current-generation hardware, these users and corporations still running Windows 9x products will see the most dramatic gains in performance and reductions in system maintenance cost of any other group, now or previously.

There are clearly some issues with this product, ranging from delayed driver support to a cost structure that was based on a world that existed before the Internet and, for the most part, no longer exists now. The first is mitigated by the first ever dynamic ability for this OS product to report back problems and dynamically update itself and the second is somewhat mitigated by volume licensing programs and aggressive hardware OEM pricing, which makes Windows XP on new hardware a real value.

Recommendations

Like any major change, this one requires some thought. Because it is a .1 product and runs better on current-

generation hardware, even Windows 2000 shops will see real value in it. While a general upgrade will likely not be justified for them, allowing this product on new hardware does provide an attractive risk/reward ratio.

For corporations on older versions of Windows that are experiencing, as most are, serious support problems with current-generation hardware and software, this product should be able to pay for itself within a year. (We will validate that as soon as we can survey the first nonsubsidized deployments in mid-2002.)

Corporations that are stable on any platform and unable to upgrade hardware or software applications likely won't be able to justify this migration either. The good news for is that 2003 is expected to be a market turn-around year and the hardware improvements alone, coupled with increased access to funds, should allow an upgrade to the next version of Windows.

In all cases, remember this system likes memory more than it needs a fast processor. The minimum memory you should have on a Windows XP system is 256Mb.

Finally, for consumers, this product is best on new hardware and should be your preferred choice.

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