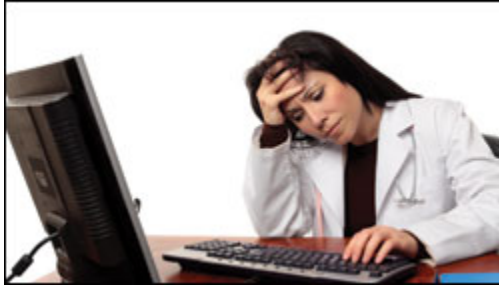


Issue: November 2008

A Grim View of Vista

by Cynthia Kincaid

MEDICALIMAGING



Earlier this year, Microsoft launched an unprecedented \$300 million advertising campaign to launch its new Windows Vista operating system. Featuring Jerry Seinfeld and Bill Gates, the campaign is one of the largest in Microsoft's history, and one it hopes will offset the negative perception that Vista is difficult to use and plagued with numerous technical challenges.

According to Randy Fusco, CTO and strategist for the US Healthcare Provider Industry at Redmond, Wash-based Microsoft, Vista was developed to focus on four key areas: improving security; finding, organizing and using information; reducing operating costs; and staying better connected.

"We have a number of large customers that have migrated to the Vista platform, recognizing the benefits around those four categories, especially security and reducing operating costs," Fusco said.

Released a year and a half ago, Vista already has 180 million registered users. "The market around Windows Vista, in terms of hardware and software providers, has matured greatly, and we're very happy with the state of the quality of Windows Vista today," said Christopher Flores, director of the Windows Client Communications Division at Microsoft.

But not everyone is happy with the new operating system. Vista has been burdened by negative reactions and criticism for its lack of user-friendliness, as well as technical challenges, particularly in the medical field.

"It's a phenomenally demanding operating system and a resource hog," said Ed Heere, president and CEO of CoActiv. "Driver issues and security issues abound, and there is both restrictive security and security holes."

Lynda Domogalla, director of product marketing for Barco, finds that Vista does provide an attractive interface that almost mimics Microsoft's archrival, Macintosh, but that kind of interface is unnecessary for most medical users. "Things are attractive and Mac-like, but that's not really what the medical market is using," she said. "Vista requires quite a bit of application redevelopment from software people, and for medical people, Vista offers things that we don't necessarily need to take advantage of."

Microsoft concedes that application redevelopment may be needed, since it purposely created Vista with an "open architecture" that allows any type of hardware manufacturer to easily integrate or redevelop applications. "Vista is a horizontal platform that many different industries take and tailor to their own specific needs," Flores said. "Every new operating system goes through a standard adoption curve, and people need to analyze it and make sure it meets their needs."

Controller Card Incompatibility

One of the biggest challenges that users in the medical imaging field are grappling with in Vista is the incompatibility with controller cards. "In the last several generations of operating systems, we had the ability to run multiple display controllers on one system, so we could have a color controller and a controller for viewing x-rays," said Jim Lindsay, account executive for AMPRONIX.

The standard configuration of workstations allows for a color panel (monitor) for patient information and a grayscale panel (monitor) for viewing x-rays, CTs, or MRIs. "Windows has never really supported grayscale, and it still only supports a 256 grayscale palette," Lindsay said. "That's not suitable for viewing medical images." With Vista, Microsoft has simplified graphics, resulting in the software recognizing only one controller card at a time. So, medical imaging departments, running a standard workstation configuration, can't run both color and grayscale palettes together, which has become a huge problem.

"We do not endorse, nor do we recommend, Vista's use on diagnostic workstations," Heere said. "Because setting them up to correctly work on Vista, with the grayscale palettes and multimonitor displays, is quite a task."

Domogalla has also found the coordination of color and grayscale diagnostic displays to be one of the biggest challenges for her customers. "A standard medical installation will have two diagnostic displays, and they may be color or grayscale, but they are driven by a very high-resolution, medical-specific display controller," she said. "Right now, you can mix the display controllers and drivers for those with no problem, but under Vista, those boards and drivers all have to be from the same family and be of the same type." In other words, the mixing of controller cards and drivers that medical imaging departments now routinely engage in is not possible under Vista.

According to Microsoft's Flores, these controller card issues may not be related to Vista, but to incompatible hardware. "We focused heavily on the area of data visualization because all of the imaging technologies in the medical field rely on a computer that has the ability to present and visualize very complex sets of information in a meaningful way, both for patients and physicians," he said.

The Challenges of Utilization

Physicians are also struggling with using their Vista home computers to remotely interface with their hospital and medical imaging operating systems. Since just about every new computer comes with Vista preinstalled, compatibility with these new machines talking to existing hospital software has become frustrating at best. "Doctors purchase computers for their home use for doing tele-radiological applications, and we've got to make sure they don't go to their local computer store and buy a PC off the shelf," Lindsay said. "Typically, that computer is going to have a home version of Windows built into it, as opposed to the professional version, which doesn't have a lot of the needed media integrated into it." Domogalla and Heere said they have found the same problems with their physician clients. "Obviously, they can't be using Vista unless the hospital is," Domogalla said.

But Flores said that Vista and Microsoft's previous operating system, XP, are compatible. "Medical file formats haven't changed between XP and Vista," he said. "This goes to the adoption curve. As with the rollout of any new operating system, for a period of time, you're

very much living in this heterogeneous environment, where you have some Vista machines and some XP machines, but they are very compatible with one another and shouldn't pose a problem."

Seeking Solutions

Because of Vista's challenges with controller card incompatibility, along with its instability and unpredictability as an operating system, many hospitals and medical imaging departments are reluctant to embrace the new operating system.

"They're going to wait as long as they can to switch, so by the time they do switch, it will be a stable operating system," Domogalla said. "Our big customers have told Microsoft that they need to be able to order workstations with the XP operating system until there is a solution that's going to be workable for our market.

"Our customers all have projects that are going to be ready for Vista; they're just waiting until they absolutely have to," she added.

But CoActiv's Heere believes many medical imaging departments will skip Vista altogether and wait for the next release of Windows to upgrade.

"I don't know of any primary imaging centers, hospitals, or freestanding imaging centers that are installing Vista on their diagnostic workstations," he said. "No hospital with 2,000, 3,000, or 4,000 PCs is going to go to Vista. They're going to go to whatever the next release of the Windows is."

But to keep some current clients functioning in the new Vista environment, CoActiv has created Vista compliant applications. "To keep our clients happy, we had to put a product on the market," Heere said. "We are one of the first fully functioning PACS and CD-burning companies that is Vista compliant. When we decided to put a Vista-compatible version into the market, we incorporated a fair number of new functionalities, features, and changes to it."

Barco has also created a solution for its customers where the company provides both display controllers and drivers for Vista compatibility. "They can mix color and grayscale, high resolution, and low resolution," Domogalla said. "We can provide one driver solution for everything, which solves one of the changes with Vista."

As far as the controller card compatibility issue goes, Lindsay said that card manufacturers are trying to find solutions for the problem. "All of the controller manufacturers are aware of this. You're going to start seeing solutions where you have one controller card that will allow you to run three different types of monitors," he said. "But I have customers that have four monitors, or even six monitors, along with the color panels, and that situation is going to be tricky for Microsoft to do anything about, unless they change their architecture."

A Different Approach

Many in the medical community are hoping for Microsoft to make a change in its approach to Vista. "For the medical community, somebody's going to have to give here," Lindsay said. "We're going to have to see Microsoft changing the architecture so that it will accommodate other types of video controllers, or we're going to see people using two different computers on one workstation."

According to Domogalla, Microsoft seems to be open to these changes. "Already in our talks with Microsoft, it seems like they are discussing some changes to Vista that will make it a little more applicable for this market," she said. "I think they are now hearing some of what we're struggling with and looking at whether or not some of this can be better supported moving forward."

Flores acknowledges that Microsoft is willing to work with all of its customers to ensure a smooth transition to Windows Vista. "We have a very robust tool set that allows people to do a software and hardware inventory of the tens of thousands of machines that they might have," he said. "We will work very hard to make sure that there is indeed a smooth transition."

Lindsay believes that, ultimately, Microsoft may release a version of Vista aimed directly at the medical community. "I think it will be geared more toward the professional user and offer more stability, fewer conflicts within the operating system, but still have the functionality needed for more streamlined performance."



Still, he concedes that the incompatibility of controller cards remains a challenge. "We haven't seen too much progress on this big issue of not supporting more than one controller card," Lindsay said. "We wonder why they changed the architecture on that because it doesn't make a lot of sense."

Ultimately, for medical imaging departments and hospitals considering the move to Windows Vista, caution and prudence are the order of the day. "We see our customers waiting as long as they can but also getting prepared in their engineering and design groups to be ready for it," Domogalla said.

For those who have made the decision to make the move to Vista now, Domogalla warns: "You're going to want to do your homework before you purchase anything and make sure all the components that you want to work with are going to be ready before you make that step."

Microsoft's Flores agreed. "The larger the organization, and the more desktops that you have, the more thoughtful and methodical you have to be in terms of how and when you actually roll out the new operating system," he said. "The larger the organization, the more thoughtful they will have to be about which PCs to upgrade when."