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TV Room's PC Wants to Be the Center of All Media

By SEÁN CAPTAIN

Correction Appended

LAS VEGAS

MANY air travelers have slipped DVD's into their laptops as an alternative to the in-flight movie. And for years, enthusiasts have installed tuners and software in their PC's to watch and record TV programs.

In 2002, [Microsoft](#) sought to take these activities into the mainstream with a new version of its Windows XP operating system, the Media Center Edition. Designed to turn a PC into an entertainment hub, it provided a single interface for watching TV, showing DVD's, displaying digital photos and playing music.

But PC's are still far from being fixtures in the TV room. For some people, the problem is one of logistics. PC's may not blend with the décor, or they may not fit into the racks that hold DVD players, cable decoder boxes and stereo receivers.

More important, the video from a PC set up to serve as a media center doesn't look very good, especially on a large screen, according to Joel Silver. His company, Imaging Science Foundation, tests video equipment and gives it a seal of approval for use in home theaters, which can be anything from a den with a large TV to a screening room with acoustic treatments and a \$50,000 digital projector. (The company, commonly known as I.S.F. and based in Boca Raton, Fla., also consults with electronics industry companies and trains technicians who maintain home theaters.)

With DVD's, for example, Mr. Silver notes that PC output can look fuzzy. "It was nothing that would be noticed on a 17-inch screen," he said. "On a 12-foot screen, it was impossible not to notice." DVD players that cost under \$100 typically outshine PC's that cost several thousand, he says.

A year and a half ago, Microsoft asked Mr. Silver's company to develop a certification program to improve the quality of media center computers. At the Consumer Electronics Show here last week, Microsoft's chairman, Bill Gates, announced that Alienware, [Hewlett-Packard](#), Niveus Media, Stack9 Systems and RicaVision International would offer PC's that carried a Microsoft-

I.S.F. joint certification for home theater use.

These new media center PC's resemble the audio-visual receivers they aim to replace; they're wider and lower than standard PC's, and have an assortment of audio and video jacks. One of the machines, the K2 from Niveus Media, has a black metal case, top vents and side fins, all designed to shed heat from a Pentium 4 PC silently, without cooling fans.

Reducing noise was one of the biggest challenges, Mr. Silver said. Even the systems with fans are engineered to run so quietly that they won't compete with soft dialogue in movies or with conversations when the TV is off.

Another challenge was rethinking PC video. In the computer realm, a program or a game specifies a level of brightness to display on the screen. In the video world, a signal also includes so-called blacker-than-black and whiter-than-white values that a technician uses to determine the optimal brightness and contrast cutoff levels when calibrating a TV.

As part of the Microsoft-I.S.F. program, [ATI Technologies](#), a maker of graphics cards, created downloadable software updates, or drivers, that provide video output that meets I.S.F. quality requirements on their highest-end cards. (An ATI competitor, nVidia, is also developing I.S.F.-certified graphics.)

The Imaging Science Foundation seal of approval carries considerable weight among home theater enthusiasts and consumer electronics companies, and no one interviewed at the Consumer Electronics Show questioned the video quality of the new media centers. "I'm behind it all the way," said Sam Runco, chief executive of Runco International, which makes TV's and projectors for the upper end of the market.

But companies with competing visions pointed to the expense of a PC and its reputation for crashing or falling prey to viruses. Samsung, for instance, was demonstrating a technology concept called the Intelligent AV Home Network, in which separate devices like TV's, DVD players and stereos run basic software that allows them to be networked and to share digital content, with control through a common on-screen interface similar to Media Center's.

"You don't have to buy a \$2,000 computer," said Mithun Sheshagiri, a developer of the technology. But Samsung's system won't appear in products until at least 2006, the project's leader, Alan Messer, said. Also, it will require that products from Samsung and other companies acquire networking capabilities, and that at least one of the products (likely the TV) can run the Samsung software.

Media Center supporters reject the common criticisms. The current certified products are quite expensive, about \$2,000 to more than \$6,000. But the price of the new technologies "is going to come down over time," said Muffaddal Ghadiali, who manages H.P.'s entertainment PC program. And Tim Cutting, the chief executive of Niveus Media, says PC's are stable and secure if used only for entertainment. "We're not going in there and doing Microsoft Word on it," he said.

In fact, PC technologies are already in home entertainment devices. "All of these products that we're making today essentially are computers," Jeffrey Cove of Panasonic said.

LG Technologies, for example, showed plasma televisions with built-in hard drives for recording programs, like a [TiVo](#) (which is itself a stripped-down computer).

Many of the objections may not be about bringing PC technology into the TV room, but rather about putting Microsoft in the center of it. As a counterpoint to a system built around Media Center, Mr. Messer of Samsung promotes the Digital Network Living Alliance, a consortium of consumer electronics and PC companies (including Microsoft) developing open standards that allow home entertainment devices to work together over a network.

But Mr. Silver sees greater influence from companies like Microsoft as inevitable, and potentially beneficial for customers. For instance, he admires the PC industry's ability to fix bugs quickly and to add capabilities to products through software updates, something that is just beginning to occur in other consumer electronic equipment.

And he feels it may take a heavyweight like Microsoft to push for standards that allow products to work better together. He cites Microsoft's advocacy years ago for plug-and-play capability, which allows any computer to recognize the properties of any monitor and automatically send it the right video signal. "They don't get any credit for it, because it works," Mr. Silver said.

In theory, devices like digital televisions, DVD players and set-top boxes should already have such capabilities, but they often don't. So, Mr. Silver said, a feature taken for granted on a \$300 monitor very possibly won't function on a \$39,000 television.

Correction: January 14, 2005, Friday:

Because of an editing error, an article in Circuits yesterday about efforts to improve the computers used in home entertainment misstated the name of a company that makes plasma televisions with built-in hard drives for recording programs. It is LG Electronics, not LG Technologies.