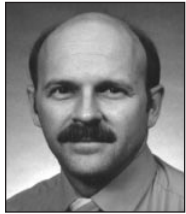


# Game Consoles Attack PCs From Below

## *Next-Generation Game Consoles Could Challenge Low-End PCs*



Reluctantly dragged below the \$500 mark by consumers wanting low price more than high performance, PCs could—for the first time since they defeated mainframes—find themselves facing a formidable opponent. Cleverly disguised as a kid's game, the enemy has generals who are now quietly assembling an arsenal and plotting strategy.

As single-purpose devices with no communications ability, today's game consoles pose no threat to PCs. They offer none of the functions provided by PCs, except for games, and they aren't really much better at games than are PCs.

That is about to change. Next-generation game consoles will look more like PCs and perform more like high-end graphics workstations. Sony's PlayStation 2000 (see MPR 4/19/99, p. 1), for example, will have a high-performance CPU, 32M of memory, DVD-ROM, IEEE-1394, USB, and a PC Card modem, not to mention killer 3D-graphics hardware. Although it lacks a hard drive, an add-on USB or 1394 drive can quickly eliminate that deficiency. The only salient distinction is that the PlayStation won't do Windows.

From a hardware perspective, there is no apparent reason that such a device couldn't serve admirably as an alternative to a low-end PC. Even without a hard drive, the PlayStation 2000 could easily perform the functions for which many people buy PCs: email, Web access, and games. With an online storage account, the PlayStation could do rudimentary word processing, spreadsheets, and homework. With a 1394 hard drive and a USB printer, it could do almost anything a PC can do. Its superior floating point, video, and 3D, will enable it to do some things even better: imagine the interactive physics or chemistry simulator that could be built for educational software.

Lack of Windows and x86 compatibility may not be a disqualifying defect. There are over 50 million PlayStations in use today, clearly enough to attract a horde of game-software developers to the platform. In a few years, there could be that many PlayStation 2000s as well. I have no doubt that software vendors will swarm to the new platform in even greater numbers, and at least some of them will try to exploit the features of the console to produce PC-like applications. Creating a browser, email client, and word processor, for example, should be no problem.

The new game consoles are likely to have the advantage of price over PCs. Sony and Nintendo know well that game consoles will not sell at more than \$199, or maybe \$299 for a premium model. The companies will do whatever is necessary

to meet these targets, as they have no intention of sacrificing the game market to capture a slice of the low-end PC market. Because game consoles are subsidized by software sales, and because PCs carry so much baggage (like Windows), it is unlikely that PCs will match the price of game consoles.

For families with limited discretionary funds wishing to join the information age, the game console may be an attractive option. It simultaneously satiates the kids' desires for a game machine while enabling occasional email and Web surfing for the entire family. The converse, however, is not true: a low-cost PC will not be a palatable alternative to a PlayStation 2000 or a Nintendo Dolphin for games. And unlike a PC, which requires considerable dedicated table space, the game console is tiny and fits unobtrusively into a home entertainment system.

Even with these advantages, however, game consoles have some hurdles to clear. Despite sentiment to the contrary, Windows actually does provide some redeeming value. Although Sony and Nintendo may develop real-time OSs that are efficient for multimedia and games, they will never create anything as complete as Windows, and they will never match the breadth of applications available for Windows.

Game consoles also have a stigma to overcome. Although many consumers can justify buying a \$500 PC on the basis of their kids' education, work at home, or financial planning, it is harder to rationalize a \$300 toy. In addition, many people would rather not compete with their children for the use of a game machine.

Although most of the features of a PlayStation 2000 can be explained in the context of a game console, its similarity to a PC may not be entirely a coincidence, especially in light of the success of low-end PCs and the promise of the Internet. Game-console vendors may well have a view toward staking out the very low end, offering expanded capability to block encroachment by PCs.

Even if successful, however, their move is unlikely to doom low-end PCs. While a few sales may be lost on the margins, the larger effect may be to halt the free-fall of PC ASPs—not necessarily a bad thing. PC-like game consoles may even boost PC sales by whetting consumers' appetites, spurring them to buy the real thing and to spend more when they do. The low-end market is far from saturation, not yet a zero-sum game. As is often the case, the new competition may have the fortuitous effect of expanding the market. ■