

Dvorak Off the Deep End

Sub-\$1,000 PCs Will Wax, Wane; Information Appliances Will Emerge

by Linley Gwennap

In response to John Dvorak's column (see MPR 05/11/98, p.18):

Dvorak is right on one point: When Compaq gave its imprimatur to the sub-\$1,000 PC, it greatly increased interest in low-price systems. There is no doubt that sales at this price point have exploded, but I stand by my estimate that this explosion represented growth from fewer than a million systems in 1996 to about five million in 1997. An impressive growth rate, but like many other product categories starting from essentially zero units, the sub-\$1,000 PC will be hard-pressed to maintain it.

While Compaq took advantage of the trend toward lower-priced PCs, the company did not create the popularity of the sub-\$1,000 PC. Although Compaq is the world's largest PC maker, it can't create demand out of thin air; if the company started offering papier-mâché PCs next month, I doubt it would sell very many.

Similarly, the MediaGX was not the key technology that created the sub-\$1,000 PC market, although Dvorak repeats this popular argument. The MediaGX is a fine and useful chip, but at best it trims about \$50 off the cost of a Pentium PC. The fact that many vendors are now shipping sub-\$1,000 PCs using AMD K6 chips and even Intel processors shows that a cheap, highly integrated processor is not a required ingredient for this market. Like Compaq, the MediaGX benefited from being in the right place at the right time.

I believe the driving factor behind the sub-\$1,000 PC is neither Compaq nor the MediaGX. Microsoft has failed to deliver compelling new applications that take advantage of today's faster CPUs—and quashed any competitors that might have done a better job. This vacuum has created a range of low-cost systems that are good enough for today's software—which is really (*yawn*) much the same as yesterday's software.

The Pinnacle of PC Evolution?

While Dvorak notes this same vacuum, he sees no killer applications on the horizon and no way Microsoft can "bloat its code" more than it already has. As a rule, I never underestimate Microsoft. Every time I work with a PC, I can't believe that the current incarnation of Windows and Office could possibly be the pinnacle of PC evolution. Until we get to the *Star Trek* level, we're not done.

Features that will suck the MIPS out of any Pentium II processor include high-quality voice recognition, which needs to be integrated into the OS, and a 3D user interface. Microsoft's Chrome project (see MPR 4/20/98, p. 21) gives a

preview of how 3D graphics can create new and powerful paradigms for improving the user interface.

Beyond these applications lies the true nirvana: what I call WYWIWYG (what you want is what you get). This interface will use artificial intelligence to analyze my work habits and learn to handle simple background tasks with little intervention. It will correct my mistakes—but not things I do on purpose. It will autoconfigure and self-install and make me forget that I'm using a computer.

High-powered processors are for ease of use, not for backyard moon shots. Dvorak forgets that we already have supercomputers on our desktops; a Pentium II has more processing power than a Cray 1. I have no doubt that the software industry will set its sights high enough to eventually keep an IA-64 processor busy.

Once these new applications begin to emerge—and it may take a year or two—the pendulum could swing away from the sub-\$1,000 PC. If these inexpensive systems can't run the latest, coolest software, fewer people will be interested in them.

Desperately Seeking the Sub-\$500 PC

Dvorak is correct that there is a class of people that want only to surf the Web and balance their checkbooks. PC makers are madly trying to build sub-\$500 PCs for these customers. I think this is folly.

First of all, trying to squeeze another \$200 out of today's bare-bones \$699 PC is tough. The total semiconductor content of these systems costs about \$100, so even if Moore's Law drives this down to zero, we're still a hundred dollars short. The rest of the system is motors and metal that aren't likely to get much cheaper in the near future.

More important, the PC is the wrong platform for such simple tasks. An information appliance, such as a Web TV, can easily handle them, with a user interface that is friendlier and simpler to use than a PC's. These devices can reach much lower price points by eliminating the disk drives, CD-ROMs, and large memories required for PC compatibility.

Although the sub-\$1,000 PC will remain a significant part of the PC market, its popularity may wane over time. Low-cost information appliances will eat into this segment from the bottom, while new software will drive other buyers toward the high end. Dvorak's comment that desktop computing is dead is rather strange and is part of the typical Dvorak boosting practiced in his columns. Instead, I think the desktop PC, at price points above and below \$1,000, will continue to thrive, complemented by a growing number of low-cost information appliances. ▣