THE PUBLISHER'S VIEW

# Apple on the Threshold

## PowerPC Offers Great Promise, But Big Questions Remain

Apple's imminent transition to PowerPC Macintosh systems will, for the first time in its history, enable it to create Macintoshes that are faster than x86 systems but cost less to build. As the only major personal computer company with control over both its hardware and its system software, Apple is in a unique position to create a fast-growing multimillion-unit market for RISC-based personal computers.

While the advantages of PowerPC are real, so are the dangers. Any time customers are faced with a transition, they naturally look around at all the alternatives. Apple has promised that the shift to PowerPC will be nearly painless. No matter how well Apple achieves this goal, however, having to decide whether to buy PowerPC or 68040 systems forces users into an evaluation mode.

The danger for Apple is that some Mac users may take this opportunity to switch to a 486- or Pentium-based PC running Windows, opting out of Apple's transition to PowerPC. To prevent this, Apple must demonstrate superior price/performance with its systems, as well as the benefits of its system software and business strategies. The first goal shouldn't be a problem—combined with Apple's new-found ability to sell hardware at competitive prices, PowerPC will enable it to make RISC Macs that are faster than Pentium systems at lower prices. Apple's system software and business strategies, however, are more problematic.

There are some serious weaknesses in Apple's underlying operating system. While the Mac has a good user interface, it lacks preemptive multitasking, memory protection, and multithreading. Windows 3.1 shares these weaknesses, but 4.0 (Chicago) is supposed to remedy all of them. Unfortunately, it appears that Apple will take considerably longer. Apple has talked, quietly, about an eventual shift to a new microkernel-based operating system core that will provide preemption, protection, and other features, but the timeframe is always left vague. If Chicago isn't delayed too long, it could give Microsoft a significant OS edge.

It is Apple's business strategy, however, that is most disturbing. For prospective system purchasers, the biggest difference between buying a Mac and buying a PC is that there is only one brand of Mac but countless brands of PCs. This makes the PC purchase decision more complex, but it provides a wider variety of products at more competitive prices.

By licensing its operating system, Apple could expand the range of Macintosh systems and ensure competitive pricing, making the platform more attractive to users and software developers. Apple's failure to adopt a licensing strategy in the late 1980s, before Windows 3.0 was shipped, must be one of the biggest business blunders of all time. The Macintosh was, at that time, vastly superior to the PC in both its OS and its applications. If Apple had made it easy for a number of PC makers to enter the Macintosh market, the growth of the PC platform would have been stunted. Apple would have a large share of the total Mac market, and it would earn a royalty on all the other Mac systems. Most important, application developers would see the Mac as their top market, instead of a secondary one.

It is too late for Macintosh ever to become as important as it could have been, but Apple still has an opportunity to give it a big boost by licensing the OS. Apple has finally begun discussing licensing its operating systems, and CEO Michael Spindler confirmed at the recent shareholders' meeting that System 7 on PowerPC would be licensed to other system makers. Sources say, however, that the major PC makers have turned Apple down because of restrictions Apple wanted to place on them. Apple apparently wants to license other companies to go after niches, not to compete with Apple in whatever way they choose—such as on price. Apple needs to license the operating system without restrictions, so it is truly an open standard, not just a small club. Supporting the Prep hardware standard would be another positive step.

Let's hope that Apple will do a better job with PowerPC than it did with Newton. Newton, as a device, actually isn't bad—but the way it was introduced, the lack of adequate supporting software, and the delay in providing e-mail service have been crippling. Apple's nearly complete failure to integrate the Newton with the Mac before introduction is astonishing. (To this day, there is no practical way to transfer a list of names from a Mac to a Newton. Apple promises that its Connection Kit 2.0—due any day now—will solve this problem.)

The PowerPC Macintosh, even if not licensed to other vendors, should enable Apple to defend its market share and possibly even induce a few PC users to switch. If Apple's management can get over its fears and make the PowerPC Mac a truly open platform, a growing role for the Mac would be assured, and Apple's own future would be brighter. ♦

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