

Prepare Now for Apple's Switch to Intel

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Apple Computer plans to move to Intel microprocessors, after a decade of using PowerPC chips. Macintosh-oriented enterprises and developers should immediately begin preparing for the migration.

NEWS ANALYSIS

Event

On 6 June 2005, Apple announced that it will switch microprocessor manufacturers. Apple, which has used IBM's PowerPC architecture since 1994, plans to deliver Intel-based Macintosh models by mid-2006 and use Intel chips exclusively by year-end 2007.

Analysis

This decision comes as a surprise, because Apple was an early supporter of PowerPC architecture. Apple must see significant business benefits — in terms of both price and performance — in the switch. Another likely factor is the opportunity to gain access to Intel technologies in areas including platform management, hardware virtualization and WiMAX.

The Apple move gives Intel a high-profile customer, as well as a strong growth opportunity and a strong partner for its new Digital Home Group. It is, of course, a public-relations blow to IBM and marks PowerPC's shift in focus away from the client computing market (it still holds a leading position in servers and high-performance embedded applications). This change will, however, be offset somewhat by the game console market, where IBM microprocessors are in all three next-generation consoles.

The transition to Intel should be comparatively simple for Apple to manage. Apple has not identified the Intel chips it will use, but next-generation Pentium M and D are the likely choices. Mac OS X and current major applications should run well, and application migration should be fairly simple, because of the Unix code base. (An Apple binary translator technology, code-named "Rosetta," will enable PowerPC applications to run on Intel-based Macintoshes without recompilation.) The x86 Mac OS will run only on Apple hardware, possibly with enforcement through Trusted Platform Module technology.

Apple clearly does not plan to try to compete against Windows, which — though it will run on Intel-based Macintoshes — will not be supported by Apple. Nonetheless, many design-conscious Windows users may be willing to pay premium prices for Apple hardware. Apple/Intel compatibility also raises the possibility of virtualization technologies that enable a machine to run both OS X and Windows. In the longer term, Apple could change its strategy if it sees a market opportunity for its OS on the broader x86 platform.

Recommendations

Enterprises using Macintosh systems: Continue with your Apple purchasing plans, but switch to Intel-based Macintoshes when these models become available. Consider delaying software purchases until vendors offer a clear road map for upgrades to Intel-compatible versions.

Macintosh software developers: Plan for immediate migration to the Intel-based Macintosh platform.

Analytical Sources: Stephen Kleynhans, Van Baker, Mark Margevicius, Martin Reynolds and Michael Silver, Gartner Research

Recommended Reading and Related Research

- "Apple's Mac mini Points to Renewed Interest in Small PCs" — The size of the Mac mini suggests that very small computers could see a revival. **By Martin Reynolds**

- "Don't Assume Your Macs Are Immune to Security Flaws" — Businesses using Macs must guard against malicious-code attacks and spyware infestations. **By Martin Reynolds**

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