Crunch point

Apple wants to take on the enterprise, but its target audience will take a lot of convincing.

Apple is irrelevant. That is the almost universal belief of corporate IT buyers. Its systems use a proprietary operating system instead of the ubiquitous Microsoft Windows; they don't run standard software; they don't fit into corporate networks; and they are incompatible at practically every level with 'proper' business machines. In summary, Apple computers are little more than expensive toys for designers.

"Apple no longer speaks to the people who are doing typical IT work in most companies," says IDC analyst Dan Kusnetzky. "Microsoft speaks to them." The company's recent move into selling music downloads just compounds the argument that its energies are focused elsewhere.

But many of Apple's detractors might be surprised to learn that the company is now the biggest vendor of Unix-based computers (its latest operating system, OS X, is a variant of the FreeBSD version of Unix); that it sells rack-mounted servers that support mainstream computing standards such as Active Directory and J2EE; that it has developed storage disk arrays that are capable of storing up to 2.5 terabytes of data at a fraction of the cost of its competitors ($4.40 a megabyte, compared with $13.60 a megabyte); and, perhaps most surprisingly, it also has a native version of Microsoft Office.

Almost unnoticed, Apple has gradually built up an arsenal of enterprise-friendly computing products. The question now is, can Apple change the perceptions of the majority of IT buyers and realistically compete against Hewlett-Packard, IBM and Sun for a slice of the corporate IT budget?

BITE SIZE

Apple's track record in the enterprise market is not a successful one (see box, *On the sidelines*) and its market share remains woefully small. In the fourth quarter of 2002, for example, Apple Computer had a 3% share of the PC market, according to analyst company IDC. In the enterprise server market, the company barely registered.

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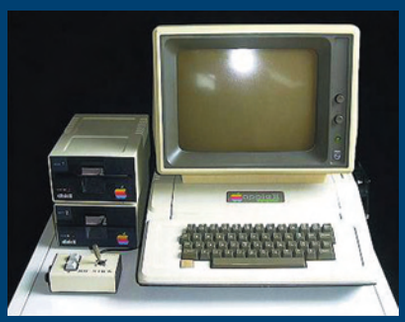
On the sidelines

DURING the late 1970s and early 1980s, the Apple II was the dominant personal computer in terms of market share. With a graphical user interface (GUI), a mouse and many other innovative features, the Mac was leaps ahead of IBM's computers, which at the time only ran text-based operating systems. But as soon as IBM launched its own personal computer and broke into the corporate market, the consumer-focused Apple II struggled to maintain sales.

The launch of the Apple Macintosh in 1984 was the first of many attempts to prevent the erosion of its market share. Its 'killer application', the desktop publishing package Aldus PageMaker, spurred widespread adoption in the creative industries but also locked Apple out of many corporate accounts.

Since then, Apple has attempted several times, and with various degrees of enthusiasm, to avoid being pigeonholed as the platform of choice for media professionals. It produced enterprise servers based on IBM's AIX Unix. It developed its own version of Linux. It even appointed Oracle CEO Larry Ellison to its board. But these moves have done nothing to stop its dwindling corporate presence.



Getting personal

Its first attempt, in the late 1990s, to branch out into servers generated relatively few sales. Then, in mid-2002 it launched Xserve, a mid-range server that sells for around $3999 and offers 60 gigabytes of storage. Apple has also branched out into RAID (redundant array of independent disks) storage. Although both of these products have been well received from a technical standpoint, that has yet to translate into market share.

But Apple has won considerable praise for its new high-end server, Xserve. And, since the product's launch in mid-2002, Apple has notched up a number of customers in life sciences and digital content creation, who use clusters of the dual-processor Xserve to tackle mammoth computing tasks.

But these more technical types of customers are somewhat unique as they generally write their own software. Standard business customers rely on a large collection of server software, such as databases and systems management tools, many of which are not compatible with Apple.

Apple's biggest problem has always been that it produces machines that cannot directly run software designed for PCs with Intel processors and a Windows operating system. People who need particular pieces of software that have no Mac version have had to buy PCs to run them, reducing Apple's market share. This has meant fewer mainstream developers have found it profitable to develop Mac versions of their software.

This has been Apple's greatest hurdle, argues John Handby, chief executive of CIO networking organisation CIO Connect. "It is all about standards. If you want to run Microsoft applications, you get a machine designed to run Microsoft products. A corporation will look at the de facto standard and go with it because it's just easier and cheaper to manage."

Apple is fighting back using the same standards argument. "We've moved Apple away from proprietary technology towards open standards," claims Gary Tugwell-Smith, product marketing manager for the Xserve line. "We play well with Windows. We play well with Linux. We play well in the data centre."

Indeed, rather than trying to reclaim market share by attempting to take on Microsoft single-handedly, Apple is using the standards argument to join forces with all of Microsoft's competitors and even some of its allies. Analyst company Gartner Group predicts that Microsoft may lose as much as 5% market share to alternative operating systems by 2007. The source of much of that loss is Linux – something that could benefit Apple in the long term.

Apple is also trying to fight Microsoft's dominance using other open source products. 'Rendezvous', for example, is its implementation of the Zeroconf standard, a way for network devices and services to automatically locate each other and discover each other's capabilities without intermediate servers or manual configuration.

While Zeroconf has been a public standard for several years, no vendor had actually done anything with it until Apple integrated it into its operating system and hardware. Apple opened the source of its implementation immediately, so other companies have been able to include it licence-free in their own products.

BUSINESS BENEFITS

But whether Apple has a credible alternative technology to Microsoft or not is, for most enterprises, almost incidental. For businesses to even consider using a Macintosh over a lower-specification but considerably cheaper Windows PC, it needs to derive real business benefits from the switch.

Jeanne Razzell, commercial director of Systems Support, which supplies consultancy and support services to companies such as PricewaterhouseCoopers, argues that there are total cost of ownership (TCO) reasons for

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using Macs. "They're easier to use and easier to fix," she says. "They go wrong less often in a serious way. I can send a support person out and if a Macintosh needs an application reinstalled, it takes 15-45 minutes for them to arrive and sort the problem out. On a PC, it can take a day."

Gartner research backs this up. The higher the percentage of Macs in an organisation, it argues, the lower the tech support costs. In fact, it says, PC support costs are four times higher than the equivalent costs for a Mac.

When it comes to automation and systems management, however, the case is not so clear-cut. "Apple's systems do not use any of the large scale automated tool sets," says Rob Enderle, an analyst at Forrester. "They won't use [IBM's] Tivoli, they don't work underneath [HP's] OpenView yet. Even the third-party tool sets won't work under the Apple platform so you can't administer them in large volume."

In a world that seems to be rapidly deploying large-scale, highly automated software management, argues Enderle, Apple will continue to be locked out because it has no interoperability with evolving systems management tools.

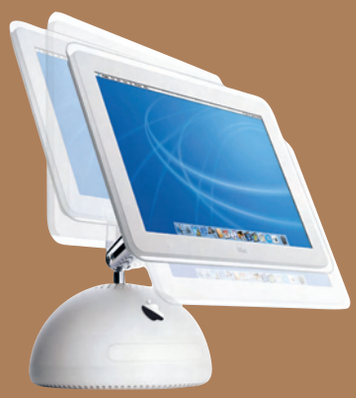
Furthermore, with the exception of Systems Support and a few others, there are comparatively few Mac support companies and mainstream outsourcers have little to do with Macs. "From our perspective, we don't see Macs in any great numbers," says Mike Lucas, technology manager at Compuware, the performance management software company. "I spoke to one CIO recently who had a PowerBook. He liked the look of it and had bought it for his personal use, but he said he didn't feel any real need or drive to look at Macs for enterprise work."

System Support's Razzell says that while business users may be open to Macs, IT departments typically are not. "From an IT department point of view, the easiest thing for them would be to have every single machine identical – all an identical age, built an identical way, by identical manufacturers. It's not surprising that IT departments are the biggest constraints on Apple's growth: it's not the users or the managers of the business, it is most often the IT or MIS department that is most resistant to a multi-platform situation because they regard it as more complicated."

The Apple product line

PCS and notebook computers: Both the iMac and iBook machines are intended for the consumer market. PowerMacs and PowerBooks, meanwhile, have higher specs to suit professional users. Both offer wireless networking based on the 802.11b standard, while peripheral standard Bluetooth is built into the newest PowerBooks.

Servers: Apple's server hardware has improved radically in the last year. Its previous servers were little more than desktop machines with more memory, and larger, faster hard drives. By contrast, its Xserve is a rack-mountable, 1U server with hot-swappable drives.



From sexy to essential?

Storage: Apple's companion 3U Xserve RAID system has a 2GB per second fibre channel connection, can store up to 2.5 Terabytes of data and support RAID levels 0, 1, 0+1, 3 and 5 in hardware and levels 10, 30 and 50 in combination with software.

Software: Apple's main differentiator is its operating system. Mac OS X is Unix-based, drawing features from the FreeBSD version of Unix, a cousin of the open source Linux operating system. This means Apple has been able to take advantage of many open source projects, including Windows networking and file sharing and support for virtual private networks. Apple has also been able to increase the number of enterprise applications available by extending its Java development environment.

On the server side, Apple has also been able to improve its software. Mac OS X Server has the same Unix base as the desktop OS and includes a J2EE development and deployment environment; support for directory services, such as Active Directory and LDAP; an Apache web server; a Sendmail mail server – all features an administrator would expect from a Unix-based system.

Furthermore, Oracle and Sybase have ported their database management systems to run on OS X Server. Unfortunately for Apple, there is no sign that SAP, Siebel, PeopleSoft, BEA and other enterprise software vendors are going to do likewise.

To combat this, Apple is running 'Switcher' ads in the US, in which various former Windows users extol the virtues of Macs. Several of these are small business owners who "just need their machines to keep working" or who want to be able to look after the machines themselves without having to call in outside help. Apple believes it has doubled its US consumer market share through these ads since they began a few months ago.

Most of Apple's enterprise marketing efforts are targeted at small and medium-sized businesses – companies that do not have their own IT departments and want to keep their IT expenditure to almost zero if possible. Apple's Tugwell-Smith says the company is well aware that it has to start from the lower end and work its way up. Xserve, he says, is for companies that want Unix but who cannot afford the skills necessary to maintain a Linux server. "Let's make it clear. We have a 1U fibre-channel device. You can't run an entire enterprise on this. We are pitching this at the part of the marketplace where the 1Us play."

Despite its renewed enterprise push, few IT decision-makers seem prepared to take the risk of betting their infrastructure on Apple. But, says Apple product marketing manager, Phil Schiller, even if the company can increase its share by as little as 1%, that would still be a 33% increase in its slice of the market. "Microsoft won't miss 1% here or there. We don't have to take on the world."

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