

## Chapter 1

# Why Switch? Demystifying the Mac Mantra

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Apple's Macintosh computers aren't perfect. They won't cure bad breath, save your marriage, or fix a bad hair day. Apple has had its share of product recalls. Talk to enough Mac owners, and you'll find one who thinks he got a lemon and wasn't satisfied with Apple's service. You can probably find a cheaper computer that will do what you really need. The vast majority of computer users get by using Microsoft Windows, and you can, too. So why even think about switching?

Macs offer you a far better experience; that's why. In big ways, such as security and industrial design, and in countless little details, Apple makes the extra effort to get things right — right for the user, not some corporate purchasing department. For those of us who spend a good part of our lives in front of a video display, those easier-to-use controls, well-thought-out software choices, and better hardware fit and finish all add up to create a tool that lets us do what we want and doesn't get in our way. For more casual users, Mac's simpler design means less head scratching while you figure out how you did that task the last time.

Life is too short for Windows aggravation. Computers are now integral parts of our lives: We use them for work, for play, to communicate, to find mates, to shop, to express ourselves, to educate our children, and to manage our money. They help us fix our homes, cure our diseases, and even clean out our attics. No one has time to fuss over them, fix crashes, fight viruses, clean out hard drives, figure out why the printer won't work, reload the software, or press Ctrl+Alt+Delete. We need computers to be there when we want them. And for the most part, Macs are. Macs just work.

Microsoft isn't run by a bunch of idiots. The company is run by some very smart people, and they hire top-notch engineers. Just getting a product as complex as Windows out the door takes extraordinary talent. But Windows is designed for corporations. A Microsoft engineer revealed on his blog that one of the company's corporate users had 9,000 programs for Windows. The user simply couldn't afford to update them for new releases. Microsoft Windows has to support all the old software that is out there. Apple is better able to let go of the past and is therefore more nimble in developing new ways to make your life easier.

Apple sees its mission as harnessing the rapid advances in computing hardware to create revolutionary new products that improve our lives. The Macintosh, the iPod, and the iPhone are each filled with groundbreaking innovations. They are cool to look at and to own. Why buy boring?

## *Be Happy You Waited*

In many ways, now is an ideal time to switch to Macs. Windows users who upgrade to the new Vista operating system will have a lot of new stuff to get used to anyway. So one way or another, a switch is in your future. If your PC is more than a year or two old, you'll probably have to buy a new computer or do a major upgrade of your existing hardware to run Vista — the PC industry is counting on it. Meanwhile, Apple has just gone through a major transition in its product line that makes Macs much more attractive to Windows users. All new Macs now run on Intel microprocessors, the same ones that power most Windows machines. In fact, any Mac sold today is a full-fledged, strictly kosher PC, one that can run the Windows XP and Vista operating systems as well as any PC on the market. So if you must run some software that is available only for Windows, you can use it on a Mac too. Yeah, you'll have to buy and install Windows separately, but I walk you through that in Chapter 13.

### **Steve Jobs' other company**

For ten years, Apple CEO Steve Jobs moonlighted in another job: running Pixar Animation. There have been many movie studios in the history of film, but few have produced eight smash hits in a row: *Toy Story 1 and 2*; *A Bug's Life*; *Monsters, Inc.*; *Finding Nemo*; *The Incredibles*; *Cars*; and *Ratatouille*. All were critically

acclaimed box office successes that made extensive use of the very latest in computer animation technology. But the key to their popularity was subordinating the gee-whiz special effects to the telling of a compelling story. Want to know what makes Macs different? Rent one of these movies.

## *Take Your Best Shot*

The question of which is a better personal computer, a Macintosh or a Windows PC, provokes passion matched by few other controversies. Were the world less civilized, Apple fans would long since have been burned at the stake by more numerous Windows users fed up with hearing how great Macs are. Instead, the debate rages over claims that Macs are not a suitable choice because they're too this or can't do that. The following sections outline the principal objections.

### *"Macs are too expensive"*

If you are looking for the absolute cheapest computer you can find, you are reading the wrong book. As of this writing, you can buy a new Windows XP computer for as little as \$300. But when you price higher-end configurations from name-brand manufacturers — ones that match what you get standard with a Mac — the difference in price is less and often disappears. In the United States, you can buy a complete and very usable Mac desktop setup for under \$600, assuming that you already own a suitable display, keyboard, and mouse; you can buy an excellent MacBook laptop for about \$1,100.

The arguments for buying a Mac are based on quality and total cost of ownership, not initial purchase price. Few people boast about how cheap their car is or how little they spent for their home entertainment center. A cheap product that causes you years of aggravation is no bargain.

### *"Switching is too hard"*

I'm not saying that switching from Windows to a Mac is painless. If you have been using Windows for a while, you are used to its idiosyncrasies. You made a big investment in learning how to use all that Windows software, not to mention what you paid for it. You may find some aspects of the Mac hard to get used to, though I guide you through all this in Chapter 4. But on the whole, it's not that bad. Macs and Windows PCs have more in common than they have differences. All in all, I think you'll find a switch worth the effort.

### *"I'll be left with no software"*

Many Windows advocates claim that less software is available for the Macintosh. The standard smart-aleck Mac user answer is, "Yeah, we really miss all those viruses and spyware programs." But some truth to this objection exists.

Certain highly specialized programs in many fields only run in Windows. If equivalents exist for the Mac, you might have fewer choices. On the other hand, thousands of software titles are available for the Mac, and they cover the needs of most users quite well.

Some great software is available only for the Mac. Every new Mac comes with Apple applications for e-mail, instant messaging, address book, calendar, and of course, iTunes. Apple's iLife suite, also included, has programs for photo management, making movies, burning DVDs, creating Web sites, and even composing your own music. New Macs that have a built-in display (laptops and iMac desktops) all have a built-in camera and include powerful video-conferencing software that works with industry standards.

The Mac OS X operating system is built on top of UNIX, and Apple follows the Single UNIX Specification. This means that a large amount of software developed for UNIX and Linux operating systems can run on your Mac, including many popular, free, open source packages. Much of that software does not run in Windows.

Finally, as I mention earlier in this chapter, Macs can also run Windows, so you can still run the odd program for which an equivalent isn't available on the Mac.

## ***“Macs are dying out”***

Macs *were* close to dying a decade ago. Their share of the personal computer market was less than 3 percent. However, their share has been climbing steadily, and at last report was 7.6 percent in the United States. But that isn't the whole story. Consumers buy only about 37 percent of the total PCs sold. The rest are purchased by corporations — think of all those PC-based cash registers you see in stores and restaurants. Add in all those office workers who have no say in the computer they use. Apple has very little presence in the corporate world. Most companies restrict Macs to the creative departments. So that 7.6 percent of total sales may represent up to 20 percent of the consumer market — people who buy the computer for their own use. And Apple's share is growing. More than half of all new Macs are purchased by people who were using Windows before.

## ***“Macs are not expandable”***

Since the earliest days of the IBM Personal Computer, PCs have come in big boxes that a user could open to install expansion cards or to add memory and hard drives. Steve Jobs horrified the techie end of the PC world when he built the original Macintosh as a self-contained unit that users were not supposed to open. Apple later relented and offered the Mac II, which had expansion slots — six of them — but few users filled them. So instead, Apple developed a blazingly fast expansion port, called FireWire, that lets users attach high-performance devices without opening the box. The PC world responded by developing its own fast expansion port called USB 2.0, which Apple then adopted as well. All

new Macs offer both these ports, allowing a wide range of accessories to be attached just by plugging them in. Macs also offer networking and wireless capabilities. For those who think they must have expansion cards, the top-of-the-line Mac Pro comes in a big box that you can open to install the same PCI Express expansion cards that modern PCs use. But I don't think most of you will ever need to do that.

See Chapter 2 for an introduction to the Mac models currently available.

## ***“Macs don't comply with industry standards”***

Early in Apple's history, Steve Wozniak, a cofounder of Apple and its engineering genius, came up with a clever way to squeeze more bits onto a floppy disk (an early form of portable data storage for you youngsters). Unfortunately, this design made floppy disks written on early Macs unreadable on IBM PCs. That gave Apple a reputation of being an odd duck, from a standards standpoint, which it has never been able to shake completely, even though it later added PC-compatible floppy drives and is now exemplary in sticking to industry standards. Indeed, Apple was the first to popularize now-ubiquitous computer industry standards such as WiFi wireless networking and the Universal Serial Bus (USB). Other standards gobbledygook that Macs support include Gigabit Ethernet, Bluetooth, IEEE-1394 FireWire, PCI Express, ExpressCard/34 (see Chapter 3 for more details), and now the Intel microprocessor architecture. Apple's Web browser, Safari, now also available for Windows, carefully follows Internet standards — more so than Microsoft's Internet Explorer.

## ***“I need Windows for work”***

So run Windows XP or Vista on your Mac. You will have to buy a copy, which is an added expense. But both run fine on a Mac, and you can still use Mac OS X when you're not working. With third-party virtualization software, you can run both operating systems at the same time, with Windows applications appearing on the Macintosh OS X desktop alongside native Mac applications. I tell you more about how all this works in Chapter 13.

## ***“Macs are a poor game platform”***

True, more games exist for the PC, but plenty are available for Macs, many of the top titles too. And many more are coming. Electronic Arts and id Software now support Macs. Macs come with built-in networking for multiplayer games. How much of your life do you want to spend playing video games anyway? Sorry, dumb question.

## Will Apple license OS X for other PCs?

A perennial question in the Apple-watching community is whether Apple will license its OS X operating system to run on other PCs. With Apple's switch to Intel processors, there is no technical reason why this could not be done. Indeed Apple has to go to some lengths to discourage clever programmers from modifying (hacking) OS X to run on personal computers sold by other manufacturers. One scenario has Apple mimicking Microsoft's strategy and

selling OS X to anyone to run on any computer that meets minimal standards. A perhaps more likely scenario might be licensing OS X to one or two manufacturers who would produce computers complementary to Apple's current link, a sub-notebook, perhaps. At the moment there is every indication that Apple will keep OS X to itself and continue to play its high-end branding strategy, but Steve Jobs is known for surprises.

## *"Vista will kill Apple"*

Microsoft spent five years and billions of dollars developing its new Vista operating system, in part to end the scourge of computer viruses and spyware that have plagued the PC world for over a decade. I hope Microsoft finally got it right. In the same period, Apple has been devoting its energy to improving its OS X operating system from the user's perspective. While Vista was gestating, Apple released a series of improved versions of OS X, code-named Jaguar, Panther, Tiger, and Leopard — someone in Apple likes big cats. Microsoft still has catching up to do, but it has indicated that Vista may be its last big operating system release. The race may be too exhausting for Microsoft. Still, Microsoft will have to find some way to keep up with Apple.

## *Considering All Aspects — Advantage Apple*

Standard business school theory says that a company that sells the most product can't be stopped because it just gets better and better at what it does, to the point where no one can catch up. But Apple has adopted some strategies that give it some important advantages that let it win against the competition provided by Microsoft.

## *One neck to wring*

Microsoft sells its Windows operating system to dozens of companies that make personal computers. This has some benefits in that competition among these

PC vendors keeps prices down, but it also means that Microsoft has to support a bewildering number of different hardware designs and components (displays, hard drives, communications adapters, processor chips, and so on). And this includes not just all the variations currently being sold, but products no longer on the market but still in use, including PCs made by companies no longer in business. Outside of a brief flirtation with licensing in the mid-1990s, Apple has maintained complete control over the design and manufacture of products that use its software. This *vertical integration* greatly simplifies Apple's development efforts, allowing it to bring out new versions of its operating system much more often than Microsoft has been able to.

Vertical integration also has benefits for customers in terms of reliability and service. If you have a problem with hardware or software, Apple has a strong incentive to fix it. With the computer, operating system, and much of the software supplied by a single vendor, Mac users don't have to worry about being shuttled from company to company. ("I'm sorry, but you'll have to contact Fly-by-Night Software to solve your movie-editing problem; it makes that application.") Regardless of the problem with the extensive suite of software that comes with a Mac, it's Apple's problem. There is only one neck to wring.

## *Apple is the industry thought leader*

Anyone who follows the high-tech industry is used to reading articles about amazing new technologies that are going to revolutionize our lives, and then never hearing about them again. One of Apple's roles in the computer industry is to pick and choose among those new ideas. For the most part, technologies that Apple picks get adopted by the rest of the industry, particularly Microsoft. Apple may not have invented the graphical user interface, WiFi wireless networking, or the universal serial bus, but Apple's adoption of these technologies made them industry standards. Apple users get the good, new stuff first.

## *Appearances matter*

Sometimes you *can* judge a book by its cover. Sometimes function follows form. Early on, Steve Jobs, Apple's CEO, recognized that aesthetics matter. The original design team that created the first Macintosh computer included a fine artist who was involved in everything from graphical interface design to the artwork on the cardboard box that the Mac came in. When Jobs returned to Apple in 1996, he restored artistic quality to prominence at Apple. From the original lollipop colored iMac to the latest iPod, Apple's products have won awards for excellence in industrial design.

Quality industrial design means more than arranging all the buttons and jacks in a pleasing way. It means questioning each feature and eliminating unnecessary doodads. The result is something that isn't just easy to look at but is easy to understand and simple to work with.

A case in point is the Apple Remote that comes with each Mac. Remotes for most consumer products rival an airplane cockpit in complexity; Apple's has just six buttons.

## *Looking forward, not backward*

Apple's leadership in technology extends beyond picking winners. Apple is also the company that decides when to tell a technology, "You're fired." Apple was the first to introduce 3½-inch floppy disks on personal computers and the first to drop them as a standard feature. Other technologies that Apple was the first to drop include the RS-232 serial port and the dialup modem. You can still get these features as external add-ons if you really need them, but Apple realized that most of us no longer do. Letting go of old technology wards off the feature bloat that plagues the computer industry. Unneeded features increase complexity and make machines harder to use and more prone to problems.

## *Getting top-notch products*

Apple makes money on the products it sells. Unit for unit, Apple is the most profitable company in the industry. How does the company do that with such a small share of the market? The same way that Mercedes-Benz or BMW or Armani does — by branding. Apple doesn't sell products that are interchangeable with products sold by half a dozen other companies. It sells something unique — products sufficiently superior for which customers willingly pay a bit more. The benefit to you as a Mac buyer is the simple reality that no company can keep such an enviable position in the long run without delivering top-notch goods. You do get what you pay for.

## *Innovating with the enemy*

For most of the personal computer era, the Intel Corporation, inventor of the microprocessor and creator of the x86 series of microprocessors that power most PCs, was closely allied with Microsoft. The term *Wintel* was coined to describe a Windows-compatible PC, a contraction of Windows and Intel. Over time, however, the interests of Intel and Microsoft have diverged somewhat. Other companies, particularly AMD, have cloned the x86. Microsoft keeps its software compatible with all current x86 machines. That limits Intel's ability to innovate. Microsoft will not readily adopt new features introduced by Intel that are not supported by other microprocessor makers.



In 2005, Apple announced that it would be partnering with Intel. Now all new Macs use Intel chips. While Apple says it based its decision on the computers Intel already had on the drawing board, Intel's *microprocessor road map*, strong hints have surfaced that Apple expects to take advantage of unique innovations from Intel in the future.

## *iPod and iPhone*

Apple's runaway success with the iPod personal music player, introduced in 2001, has given the company the kind of market dominance that Microsoft has enjoyed in the PC market.

Apple's iPhone has been hailed as a revolution in personal communications. It combines a four-band phone that uses the worldwide GSM standard, allowing its use anywhere, with iPod music and video technology and direct Internet access via WiFi or cellular phone links. Apple includes its OS X operating system in the iPhone, with a well-integrated and easy-to-use interface, all in a spectacularly elegant package.

Apple gives away a version of its iTunes music software that runs in Windows. Apple is betting that iPod and iPhone customers who use Windows will be impressed by iTunes's ease of use and will give the Macintosh a closer look when they are ready to upgrade their computers.

## *Switching Sides*

The Mac-versus-PC debate ranks as one of the great emotional divides in the modern world. Just because these feelings are whipped up by marketing departments doesn't mean that they lack emotional impact. Your computer choice forms part of your personal identity. Mac users have a reputation for a certain smugness. (You just got a virus? You mean like a cold?) Much of that is defensive, of course. It's no fun being a minority in a PC-dominated world. (You bought a what? Are they still making those?) Few other choices we make in life can be as self-defining — perhaps religion, political party, and sports-team allegiance. People who move from New York City to Boston invariably suffer mental scars inflicted by changing baseball allegiance from the New York Yankees to the Boston Red Sox. Some never recover and have to live the rest of their lives in sheltered halfway houses, eking out a living writing books for novices about technology.

## An optional brief history of Apple

You don't need to read this sidebar to make your decisions, but no book on switching to Macs would be complete without a little history of how the Macintosh got where it is today. Writing about computers allows one to tell stories no fiction publisher would print. None of the science fiction magazines that warped our formative minds dared to predict the level of computing power beneath our fingertips or in our shirt pockets. But no high-tech story is as compelling as the legend of Steve and Bill, two kids from the West Coast of the United States who revolutionized the world.

Apple Computer was founded on April Fools' Day, 1976, by three young men: Steve Jobs, Steve Wozniak, and Ronald Wayne. Their original mission: Sell low-cost circuit boards on which hobbyists would build their own computer, based on the newly invented microprocessor. That mission quickly changed when Jobs found that a local electronics shop wanted more fully assembled systems and gave him an order for several dozen of them. The price of Apple's first product, the Apple I, was \$666.66. That sum would buy you a vastly more capable Mac mini today. Adjusted for inflation, it would come out to about \$1,900 in 2007 dollars, enough for a MacBook Pro or high-end iMac.

The Apple I used a 6502 microprocessor, considered easier to program than the early groundbreaking devices from Intel, and featured a BASIC interpreter. BASIC is a particularly simple computer language invented by a Dartmouth professor, John Kemeny, to help teach programming. A young programmer named Bill Gates dropped out of Harvard — horrifying his parents — to start a business selling software to the fledgling microcomputer industry. He chose the imaginative name *Microsoft* for his venture. A BASIC interpreter

for microcomputers was Microsoft's first product, and Apple was among its earliest customers. The choice of corporate names was prophetic: a utilitarian contraction versus a friendly fruit icon.

The Apple II quickly supplanted the primitive Apple I and propelled Apple Computer to early leadership in personal computing. Dan Bricklin wrote VisiCalc, the world's first spreadsheet program, for the Apple II. If you crunch numbers for a living, imagine what the world was like when a spreadsheet was just a wide piece of ruled paper on which calculations were recorded one at a time by hand, and you can appreciate the impact of VisiCalc.

Microsoft got its big break when International Business Machines decided to try its hand at making a personal computer and chose Gates's company to supply the all-important operating system. While IBM is a well-respected name in computing today, back in the 1970s, it pretty much owned commercial computing. Almost every major corporation in the world used IBM computers. Young computer professionals were told by older hands that no one was ever fired for buying IBM. While some Apple IIs had made their way into the corporate world because of VisiCalc, they were soon replaced by beige boxes sporting IBM logos, a Microsoft operating system called DOS, and an even better spreadsheet program — Lotus 1-2-3.

The Apple II was a hard act for Apple to follow. Apple made two disastrous attempts, the Apple III (a souped-up Apple II) and the Lisa. The Lisa was a machine ahead of its time, pioneering the use of a mouse to move a pointer on the screen and letting users initiate actions by manipulating icons representing programs, data files, hard drives, and so on. But this *graphical user*

*interface* could not overcome a \$10,000 starting price, and few Lisas were sold.

Jobs, fed up with the increasingly corporatized development environment at Apple, led a renegade team to develop a more affordable computer, based on much of the same technology as Lisa. The new Macintosh was announced during the 1984 Super Bowl with what is perhaps the best television commercial ever made. You can see it at [www.uriahcarpenter.info/1984.html](http://www.uriahcarpenter.info/1984.html).

Besides its mouse and graphical user interface, the Macintosh was packaged as a single unit with a built-in, high-resolution — for its time — black-on-white screen that crisply displayed what would eventually print on paper. IBM PCs offered green letters on a black background in just one font. The higher-quality Mac display enabled a “what you see is what you get” document-creation process and started the desktop publishing revolution. The Mac also introduced 3½-inch floppy disks, and its Motorola 68000 microprocessor could address more memory than the Intel 8086 in the IBM PC, allowing the use of more sophisticated programs.

Microsoft hedged its bets by developing software applications for the new Mac, including a word processing program called Word and a spreadsheet called Multiplan. Jobs and Gates personally negotiated a contract that let Microsoft sell a simplified version of a graphical interface called Microsoft Windows 1.0. When Microsoft later released a full-blown graphical user interface in Windows 3.0, Apple sued, but the courts ruled it was covered by that one-page contract. Word became the flagship word processor for Windows, and Excel drove out 1-2-3.

Jobs left Apple in 1985 after some disagreements with the board of directors and started a

new computer company, NeXT. NeXT built a graphical interface on top of an operating system called UNIX that was originally developed by the American Telephone & Telegraph Company (ATT). UNIX was popular with computer researchers because of its flexible design and because a version with source code was available.

Apple continued to introduce more powerful versions of the Macintosh, adding hard drives, laser printers, and high-resolution color displays. Its share of the personal computer market continued to decline relative to IBM PCs and their clones. In 1994, Apple switched from the Motorola 68000 series microprocessor to the PowerPC chip, jointly developed by Motorola, IBM, and Apple. The PowerPC was designed to allow programs to run faster than those for the Intel chips, but the theoretical advantage never materialized as Intel chip engineers used innovative techniques to keep up.

In 1997, Apple acquired NeXT and Steve Jobs rejoined the company, soon taking the helm. A year later, he reinvigorated Apple’s sales with the iMac, an all-in-one computer that echoed the original Macintosh. A flat-panel version appeared in 2002. Apple soon replaced its OS 9 operating system, whose lineage goes back to the first Macintosh, with a new system, OS X, based on the NeXT operating system. The iPod was launched in 2001.

In 2005, Jobs ended the personal computer microprocessor wars when he announced that Apple would switch to Intel microprocessors, a transition completed in 2006. In 2007, Jobs introduced the Apple TV (🍏TV), extending the Apple brand to the living room, and the spiffy iPhone, hoping to set a new standard in mobile communication.

This kind of psychological trauma doesn't have to happen to you just because you switch computer platforms. Think of it this way. The PC really won the great war. Apple was forced to abandon the Motorola processor family and convert to Intel. Macs are now just PCs in a more stylish package with some better software. You're not abandoning your mother's cooking, just sampling a different cuisine.

No matter what I say, you probably won't completely escape the emotional side of switching to a Mac. When you feel the shame of betrayal and the pangs of guilt coming on, repeat this mantra: *"It's just a computer. It's just a computer. It's just a computer. . . ."*