

Pre-Class Reading Assignment

How Apple's Corporate Strategy Drove High Growth

This set of press articles was prepared as one of the assigned readings for the case "How Apple's Corporate Strategy Drove High Growth." Copyright of each article belongs to the corresponding media specified below.

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APPLE II

Apple II: The World Catches On

By Wilson Rothman



Often it's an artist's second book or album that draws the public's attention—so too with Apple's number 2, whose story is excerpted here from Core Memory, photographed by Mark Richards and written by John Alderman.

Name: Apple II

Year created: 1977

Creator: Apple Computer, Inc.

Cost: \$US1,298 with 4KB of RAM; \$US2,638 with 48KB of RAM

Memory: 4K semiconductor

Processor: MOS technology 6502

Spurred on by the small but encouraging success of the original Apple, the two Steves, Wozniak and Jobs, retreated to the garage (Jobs') to craft the personal computer that was the most convincing case yet that such an item could have a mass market. The Apple II started where the Apple I left off, namely, with a case. It didn't look like an object dropped from a starship or developed in a military lab. It had a familiar, prosaic form of an elongated beige typewriter, though additions like the television monitor and the cassette player used to store programs made it look a little like a college-dorm entertainment centre.

If its appearance was familiar, the Apple II was also attractive to consumers in a way that previous computers just weren't—even if their manufacturers tried. It shipped with high-resolution colour graphics and sound, and it had a rainbow-coloured Apple logo that seemed both fresh and optimistic. Said Wozniak, "The Apple II, more than any other early machine, made computer a word that could be said in homes. It presented a computer concept that included fun and games—human-type things." The ability to have a business and a social side was an important sign of computing's growing relevance.

The price made the Apple II affordable for businesspeople, well-off families, and schools. It was in the education sector that its influence lasted longest—although it certainly made its mark on business as the first platform to run VisiCalc, the first consumer spreadsheet program. It was the programs that really hooked people, and the Apple II had a great roster of educational and entertainment software. By attracting developers, a snowball effect occurred, and a new generation of developers became attracted and then obsessed.

Core Memory is a photographic exploration of the [Computer History Museum's collection](#), highlighting some of the most interesting pieces in the history of computers. These excerpts were used with permission of the publisher. Special thanks to Fiona!

The top photograph was taken by [Mark Richards](#), whose work has appeared in The New York Times Sunday Magazine, Fortune, Smithsonian, Life and BusinessWeek. The eye-candy is accompanied by descriptions of each artifact to cover the characteristics and background of each object, written by John Alderman who has covered the culture of high-tech lifestyle since 1993, notably for Mondo 2000, HotWired and Wired News. A foreword is provided by the Computer History Museum's Senior Curator Dag Spicer.

Or go see the real things at the [Computer History Museum](#) in Mountain View, Calif.

[Gizmodo '79](#) is a week-long celebration of gadgets and geekdom 30 years ago, as the analogue age gave way to the digital, and most of our favourite toys were just being born.

Newton Failure

Apple Drops Newton, an Idea Ahead of Its Time

By Jim Carlton

R.I.P. Newton.

Friday's surprise decision by Apple Computer Inc. to kill the Newton hand-held computer consigns one of the computer industry's boldest experiments to the history books.

The Newton's fate exemplifies the perils of delivering products ahead of their time -- and weighing them down with hype out of proportion to their performance. The decision, the latest reversal by interim Chief Executive Officer Steve Jobs at the troubled company he co-founded, provides another clue about Apple's strategy to remain afloat.

Apple officials said they would cease further development of the Newton technology, including the hand-held MessagePad and the portable eMate, as part of a plan to focus resources on the company's mainstream line of Macintosh computers. Mr. Jobs had earlier reversed a plan to spin the Newton unit off as a separate entity, a move widely seen as a sign that the technology would play a role in his evolving strategy for Apple.

While newer Newtons have won critical acclaim, the product never recovered from bad publicity about flaws in its vaunted ability to recognize users' handwriting. The MessagePad was overtaken by upstarts, notably a device called the PalmPilot that proved the appeal of hand-held devices that do a few things well. About 200,000 MessagePads have been sold since 1993, analysts say, compared to more than one million PalmPilots in less than two years. The MessagePads never turned a profit.

Some analysts wondered why Apple didn't license the technology at some price instead of killing it outright. After all, Apple had already invested an estimated \$500 million over the past decade.

But Apple's decision reflects its difficult straits. Before finally turning a \$47 million profit in the most recent quarter, the Cupertino, Calif., company reported a loss of nearly \$2 billion over the previous two years on a plunge in sales and in share of the computer market. The company is also still seeking to hire a permanent chief executive officer, after a seven-month-long quest that has been complicated by Mr. Jobs's dominant role there.

Mr. Jobs referred questions to his lieutenants at Apple. Chief Financial Officer Fred Anderson said the company plans to re-enter the hand-held computing market next year with products based on the Macintosh operating system. "We are focused on taking an Apple of \$6 billion to \$7 billion in revenues a year to a higher level [and] the Newton product line does not fit into that mission," he said in a teleconference call with reporters and analysts. "You are better off putting all the wood behind one arrow."

Mr. Anderson confirmed that Apple had considered selling the Newton business, but concluded it could not get enough money to offset the loss of the engineers needed for the forthcoming mobile devices.

Apple provided no details of the future products, but analysts speculate they will be patterned after the unique design of the eMate, a computer shaped like a clam shell that primarily was targeted at schools. The MessagePad's sales were focused on workers who had to work in groups and needed easy communication, such as in hospitals or trucking.

The Newton project was begun in 1987 around the innovative concept of a computer converting a user's handwriting into electronic text. By the early 1990s, then-CEO John Sculley made the project a high-profile symbol for the company's vision and industry influence. "Personal digital assistants," as Mr. Sculley called them, were billed as a pivotal step in a convergence of the computing, communications and entertainment industries.

But the first Newtons, introduced in mid-1993, struggled. At an initial price of close to \$1,000, they were far too expensive for the mass market. And the handwriting recognition proved so flawed that the computer was lampooned by cartoonist Garry Trudeau in his "Doonesbury" strip.

"What happened is the Newton got stigmatized," says Roland Deal, director of business development at

Visible Interactive Inc., a software firm in San Francisco that has been using MessagePads for years. "When people would ask me about my Newton, it was like, 'Oh, does that thing work?'"

The PalmPilot, now owned by 3Com Corp., can access data with a pen-like device, but is primarily designed as a pocket-size calendar and rolodex, mostly for information transferred from a desktop PC. Paul Mercer, a former Apple engineer, says he tried to sell Mr. Sculley on such a simple device in 1991. Dubbed the Swatch, after the popular wristwatch, he developed 10 prototypes that were based on the Macintosh operating system and designed to sell for as little as \$300. Mr. Sculley said he doesn't recall the details of the Swatch proposal.

Mr. Mercer says Mr. Sculley rejected the development proposal, partly due to opposition from Apple's own engineers. "It's a big shame that Apple blew it," says Mr. Mercer, now president and chief executive of Tacit Software Inc. in Cupertino, Calif.

Over the years, the MessagePads were improved to reliably handle a range of functions, including accessing files from the desktop computer and wireless paging. Still, sales never took off in a big way. Chief Executive Officer Gilbert Amelio last summer set the business up for sale by spinning it out into a separate division called Newton Inc.

But Mr. Amelio succumbed to a board coup that transferred power to Mr. Jobs, a Newton critic who said at an Apple developers' conference last year that he had tried one but "threw it away." He folded the division back into the company and initiated an internal review that culminated in the cancellation. The unit's work force has shrunk by two-thirds over the past six months, to about 50 people, who will be reassigned.

Since Mr. Jobs was first ousted by Mr. Sculley in 1985, some see his Newton move as sweet revenge. But Mr. Sculley, ousted himself in 1993, said he was surprised at how long Apple continued to fund the product. "The basic idea of hand-held devices seems to me as valid today as ever, says Mr. Sculley, who now invests in industry start-ups. "The place where Newton broke down was that it got ahead of itself."

Still, news of its death came as a shock to a cadre of customers and software developers for the machine. At Newton Source, a store in San Francisco's financial district, a Newton developer who calls himself Lunatic E'sex commiserated with salesman Lee Wolfe.

"I think it's just hideous, man," Mr. E'sex said, shaking his waist-length hair. Mr. Wolfe, nodding, added: "This is a huge surprise. We were expecting Apple to at least sell it off."

The demise is particularly poignant for Parnell Pollioni, among the first in line to snap up one of the hand-held computers in 1993. Five years later, Mr. Pollioni is shopping for what likely will be his last Newton MessagePad. "The Newton I get will have to last me the rest of my life," laments Mr. Pollioni, head of a San Francisco cable-installation firm.

Death of a Little Machine

- 1987: Development begins on handheld-computer project called Newton.
- January 1992: Then-CEO John Sculley coins term "personal digital assistant" in industry speech, setting high expectations for new category of hand-held computers.
- August 1993: The Newton MessagePad is launched, but is criticized for flaws in its ability to recognize the user's handwriting. The device is lampooned in cartoonist Garry Trudeau's "Doonesbury" strip.
- January 1994: Apple announces it has sold only about 80,000 of the MessagePads, far below analysts' expectations. The numbers confirm the MessagePad is a flop.
- January 1995: Apple announces the MessagePad 120 with enhanced features.
- March 1996: Apple announces the MessagePad 130, with backlit screen.
- October 1996: Apple launches MessagePad 2000 and unveils new Newton product called the eMate 300 Mobile Computer.
- May 1997: Apple announces it will spin off the Newton business into a subsidiary called Newton Inc.
- September 1997: Interim CEO Steve Jobs orders Newton Inc. folded back into Apple.
- February 1998: Apple announces it is ceasing all further development of the Newton technology.

Apple's Strategic Failure in 1996

HOW WE FAILED APPLE

By Steve Wozniak

A founder laments a legendary company's decline

MY MOTHER ALWAYS SAID, "HAVE A sense of humor," and as Apple faces the biggest crisis in its history her words keep coming back to me.

In the beginning, it was easy to laugh things off. When we started Apple, it seemed as though nothing could go wrong. Our first computers were born not out of greed or ego but in the revolutionary spirit of helping common people rise above the most powerful institutions. Apple culture began with products that had a huge technological lead over the competition. They were the first low-cost computers ever with built-in color, graphics, sound and programming languages. And they were usable out of the box. Our vision was that people would find computers useful at home, for "people things" like balancing checkbooks, keeping address lists and typing letters.

Apple was so successful in this pursuit that an entire industry arose to support it. Thousands of tiny companies sprang up, created not by businessmen but by poor, young techies. It was not unlike the current explosion of interest in the Internet.

But after a while, Apple lost touch with its core market. We decided to go after small business owners who could use a spreadsheet, and designed a computer especially for them, the Apple III. With IBM nipping at our heels, every project and ad for three years was for the Apple III and not for the largest-selling computer worldwide, the Apple II. Somehow, we prospered and went public anyway, thanks to thousands of small outside companies.

It was the Macintosh, though, that became our flagship machine and spoke to the masses. It carried a message that you didn't have to think linearly and you didn't have to keep computer gibberish in your head. The Mac was the first personal computer with a mouse and menus and windows, not to mention networking and LaserWriters. Files could even be named as humans would name them. We revived the dream of people mastering technology.

The computer was never the problem. The company's strategy was. Apple saw itself as a hardware company; in order to protect our hardware profits, we didn't license our operating system. We had the most beautiful operating system, but to get it you had to buy our hardware at twice the price. That was a mistake. What we should have done was calculate an appropriate price to license the operating system.

Huge losses: We were also naive to think that the best technology would prevail. It often doesn't. Consider the tale of the 50-year-old Dvorak keyboard and the conventional typewriter. The conventional English typewriter was designed to be slow, to prevent key jams. The Dvorak, which arranges the letters in the most logical way, can improve typing speed by 10 to 30 percent and is much easier to learn. But it never took off, because people had already learned the standard keyboard. Like the Dvorak keyboard, Apple's superior operating system lost the market-share war.

Reporters and others have been asking me what I think about the problems at Apple. With such huge losses (\$69 million in the most recent quarter), they figured I would be devastated. But I'm not. Apple is very much alive despite the serious mistakes and poor luck. What happened to Apple happens in corporations every day: losses lead to reorganizations, and finally recovery. Apple's troubles are just another example of how bad news can become a self-fulfilling prophecy: I read the papers to find out who I am, so I can be it. I read the papers to find out how ill Apple is so I'll know when to give up my Mac. I suppose I should have just told my partners to forget about starting the company. Who would ever think that the day would come when we'd sell 4.5 million computers in a year and be declared a company whose time has passed?

By Steve Wozniak: WOZNIAK founded Apple Computer with Steven Jobs in 1976. He lives in Los Gatos, Calif, where he teaches computers in public school. He still owns stock in Apple.

Apple of Buyers' Eye: iMac Takes Biggest Bite of PC Sales with Jobs Key to Quick Turnaround

By Amy Feldman

Apple's stylish teal-blue iMac PC was a top seller last month, scoring a big win for the once-troubled computer giant. The rollout's success is a vindication of the strategy put into place by Steve Jobs, Apple's legendary founder who returned to the company a year ago to bring it back from near-death. Jobs declined to comment yesterday, but said in a recent interview, "Apple's future is in the consumer market. There's no company doing a great job serving that market Apple has that opportunity."

The iMac accounted for 7.1% of all PCs sold by retailers in November and 8.2% of PC revenues, according to market researcher PC Data. Last month's showing puts the iMac at the top of the heap since its August introduction. "We can't deny it anymore there is clearly an Apple buyer out there," said Roger Lanctot, PC Data's director of research. "They are hungry and they are desperate, and Apple brought to market a package that was uncharacteristically competitive," he said.

The draw of the iMac was strong during the pre-holiday computer selling season. Sales of personal computers slumped earlier this year, but they've come back strong in time for the holidays. On the strength of yesterday's sales numbers, Apple shares soared 215/16 to \$38 in heavy trading. The stock is up 190% so far this year.

While most computer makers are riding high, Apple's comeback from the depths has been especially sweet. Since the iMac wowed U.S. consumers with its curvy design and its low \$1,299 price, Apple's consumer market share has doubled to 10%, according to PC Data. "It continues to surprise us," said Peter Godfrey, chief executive of Micro Warehouse, which sells more than \$2 billion worth of computers through its MacWarehouse catalogue.

While Apple remains America's No. 7 computer maker trailing giants such as Compaq and Dell its growth rate has soared in recent months and the company has at long last become profitable again. Sales of iMacs are expected to reach 535,000 this year and should help boost Apple's profits in the latest quarter, which ends Friday. Wall Street is expecting Apple to earn 68 cents a share in the quarter, nearly double the 37 cents a share of a year ago.

The iMac's success now raises the question of what will be next for the company, since no PC maker can survive on one product alone. "The challenge now is can Apple play with a product line?" asked PC Data's Lanctot. The computer-maker is said to be hard at work developing a new, faster iMac with more features, which could be unveiled as early as next month. An Apple spokeswoman declined to comment on products in the works, but confirmed that the company planned to make an announcement at the Jan. 5 MacWorld Expo trade show in San Francisco.

But product rollouts move quickly in the computer industry, and already Apple's competitors have learned from iMac's success.

IBM, for example, has been paying more attention to the look of its PCs and to their price, recently bringing a \$599 model to market. Consumers have responded by pushing up sales of Big Blue machines by 150% this year, according to PC Data. "The iMac raises the level of water in the industry for everybody," said Lisa Johnston, a product manager in IBM's consumer division. "It has put a spotlight on the consumer segment, and gives us all the opportunity to re-evaluate."

Apple Stores

Apple builds on retail success --- Ambitious new store in New York shows gamble has paid off

By Nick Wingfield

WHEN APPLE Computer Inc. opened its first Apple retail store in 2001 in a shopping mall in McLean, Virginia, the initiative was seen as an expensive, dubious gamble by critics. As the company prepares to take the wraps off its latest, most ambitious store yet -- near the southeastern corner of New York City's Central Park -- there are few doubters about its retail strategy.

On Friday evening, five years from the date of its first store opening, Apple Computer will unlock the doors to a subterranean store on Fifth Avenue in Manhattan. In keeping with Apple's penchant for eye-catching designs, the only thing visible from the street will be the entrance surrounded by a roughly three-story-high glass cube jutting from the ground, reminiscent of I.M. Pei's glass pyramid in the plaza in front of the Louvre in Paris.

The store is in one of the most highly trafficked tourist and retail corridors in the world, and if successful could enhance Apple's visibility as it attempts to grab a bigger slice of the computer and electronics industries. Charlie Wolf, an analyst at Needham & Co., says an Apple executive told him the store will be open for business 24 hours a day, a first for the company.

"It really is the center of gravity of Fifth Avenue," says Robert Futterman, Apple's real-estate broker, of the new store location.

Apple declined to discuss details of the store ahead of its official unveiling this week.

Apple's stores are an unlikely success story in an area littered with failures. Computer maker Gateway Inc. faltered with its retail stores, while Palm Inc. has attempted to mimic Apple's success with its own shops in airports and train stations.

Revenue from the Apple stores was \$2.35 billion last fiscal year, up from \$621 million in fiscal 2003 and 17% of Apple's total sales. The company operates more than 140 stores in the U.S., Canada, Japan and the U.K., and it is expanding into continental Europe.

"The numbers have been just astonishing in terms of the traditional retail numbers we look at," Mr. Wolf says.

Apple initially started its line of stores because other retailers weren't doing an effective job of showcasing Apple's Macintosh line of computers. Since then, the Apple stores have risen the tidal wave of consumer interest in the iPod digital music player, and the stores give Apple a strong distribution channel that could help it enter new categories like cellphones and other home electronics.

Apple Chief Executive Officer Steve Jobs, a major stickler for design details, has been intimately involved in helping to turn the stores into visually memorable venues that have developed a hip cachet with shoppers. Mr. Jobs is one of the named inventors of a patent Apple secured several years ago on the design for a signature glass staircase featured in Apple stores. A person familiar with the matter said Mr. Jobs was involved in the design of the glass cube atop the new Fifth Avenue store.

In a recent interview, Mr. Jobs acknowledged that he had ordered workers to disassemble the mammoth glass cube over the company's Fifth Avenue store because he didn't like the look of the bolts holding the glass panels together. "We spent a lot of time designing the store, and it deserves to be built perfectly," Mr. Jobs said.

Apple stores have gained a strong following among young consumers, who flock to the stores to check their email through free Internet connections and to snap photos with the digital cameras on display.

iPod

It's iPod's Revolution: We just live in it

By Andy Serwer

(FORTUNE Magazine) – IT'S HARD TO RECALL ANY BRANDED RECREATIONAL product that ever carried the cultural oomph that the iPod now has. The Hula-Hoop was a fad. The PlayStation, the Prince tennis racket, and the Big Bertha golf club have all had significant competitors. As for the Walkman, the iPod's mobile-music ancestor, it generated massive sales. But it never impacted behavior or peripheral markets quite the way the iPod has.

Apple has now sold some 15 million (and counting) iPods worldwide, and contrary to what many Steve Jobs bashers suggested, sales didn't fade away after Christmas. In fact, the company sold 5.3 million of these babies in the first quarter of 2005. (That's more than one per second of every working day during those three months.) The iPod has also spawned a major peripherals boom for companies like Bose, which makes the SoundDock, and Altec Lansing, which makes portable audio units for the iPod ("a big bump for us," says an exec from the company), as well as tiny players like Griffin, which makes iTrip radio transmitters. As for accessories, there are iPod cases by Burberry, Gucci, Coach, and even a Crystalmini, covered in Swarovski crystals for \$999. Never mind the hundreds of other shells, furry bags, socks, and water- and snow-proof Pod holders out there.

Even more than its astounding success in the marketplace, the iPod has become a true cultural and social phenomenon--it's influencing lives in a way that consumer marketing types usually only fantasize about. The iPod is not just the ultimate tween girl accouterment. It's practically indispensable in a Wall Streeter's briefcase, it's often a soccer mother's little helper, and it's definitely in every college dude's backpack. (Duke says it is ending its policy of giving it gratis to all incoming freshman. Of course: They all have one already!) How many products have that kind of demographic span? Meanwhile, the Pod is revolutionizing the retail music business as we download scads of songs--over 400 million at last count--from Apple's iTunes music store. Now the Pod is storing books and photos too.

Some Podders take things further. Much further. There have been iPod parties in clubs in New York City, Amsterdam, and even places like Café Montmartre in Madison, where folks take a number and get ten to 15 minutes to try to out-deejay one another. There are websites (like www.podapic.com) that'll turn your digital photo into an iPod ad (I made my own imitation, above). The entrepreneurialism extends to kids: Ian, an enterprising 8-year-old I know, has taken to ripping his dad's friends' CDs so that they can be imported onto their iPods. (Ian gets \$1 a pop for that service, and let me tell you, he's doing just fine.) And of course you haven't really made it in our society unless you garner a theme cruise. The iPod's got one, sponsored by an outfit called Geek Cruises. This Podical journey sails from Vancouver, B.C., to San Diego in late September, and on it you can "learn how to swap out an iPod's battery and hard drive (if you dare!)."

Think about how the iPod's shuffle function is changing the way we listen to music. Having guests over? Just plug the Pod into your stereo, hit SHUFFLE, and see what happens. I did that the other night, and three hours and several cocktails later, we all lost it when the Chipmunks broke into "Jingle Bells." Radio stations are taking notice. Many across the country are switching to a new format called JACK FM, which is a long, random set list mimicking the shuffle phenomenon. By the way, for those of you like me who believe the shuffle function plays tunes in a less-than-random order (two Coltranes and a Miles all in a row?), Apple still denies it.

At some point this iPod orgy will end, of course, but I'm not going to predict when. How many families have two iPods and will buy another within a year? How many cameras does your family have? How many cellphones? Maybe we should start thinking about the iPod in those terms. It sure doesn't look like a Hula-Hoop to me.

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iTunes Music Store

A year of revolution for iTunes

By Darren Waters

As Apple's music download service iTunes celebrates its first birthday, it has had a radical impact on the music industry.

If you build it, they will come.

When Apple launched its online music store in the US on 28 April 2003, few could have predicted the impact it would have. But a year later, iTunes has helped transform the fortunes of the flagging global music industry, selling about 70 million songs and proving, once and for all, that there is a market for paid-for music online.

"A year ago if anyone had predicted iTunes would sell 70 million songs in a single year we would have been laughed out of town," Apple chief executive Steve Jobs said on Wednesday.

Last year the situation looked bleak for legitimate online services and dire for the music industry in general. Sales of CDs were falling sharply, with file-sharing programs such as Kazaa blamed for promoting piracy. The first major legitimate online services, Pressplay and MusicNet, backed by the big record labels, had launched with little or no impact. The services were stymied by a lack of big name artists, a poor pricing structure and the absence of that essential "cool" factor to appeal to the target audience of teenagers. They were also hamstrung by licensing deals which saw different record labels backing different services - it felt confusing to the consumer who simply wanted a one-stop shop for all his or her music needs.

Persuaded

Apple's approach was different - it persuaded all of the major record labels to offer songs on its iTunes service. More than 700,000 songs are available in its online library, with more than 100,000 new tracks from independent artists and record labels. It is not known how exactly Apple persuaded the big record labels to throw in their lot with iTunes. Labels were still paranoid about online music, fearing that even legitimate services would lead to an increase in piracy. But Apple initially offered iTunes only to US owners of its Macintosh computers - who make up a tiny percentage of the PC global market. Record labels may have felt that offering music to such a small market presented few risks. Apple had dipped its toe into the digital music market a few years earlier, releasing its iPod music player. iTunes was designed as an engine for iPod sales, offering downloads which can only be played on the move on Apple's portable player, adding another layer of protection from piracy.

Irresistible mix

The brand value of the iPod, combined with the reputation for innovation enjoyed by Apple and a 99 cents price point proved an irresistible mix - the company's tech-savvy users took to iTunes immediately. iTunes proved so successful that Apple was forced to widen the market - offering iTunes and iPods to PC users, dramatically increasing the numbers of potential customers.

iTunes facts

- 2.5 million songs bought per week
- 70 million tracks sold so far
- Songs cost 99 cents (55p)
- Songs can be played on iPod

The record labels too could see it made perfect business sense because after many false starts, iTunes was proving to be the first genuine, legitimate service. The move proved inspired - iPod is now an essential part of the firm's business and in the last quarter Apple sold more of portable music players than it did computers. "It is the only seamless music experience in the world," said Jobs, highlighting the three components of the iTunes music player, music store and iPod. But iTunes has not had it all its own way. Apple's chief executive had boasted that iTunes would sell 100 million downloads in its first year, but it has fallen short at 70 million. Rival services, such as Napster, have launched in the US in the past year and the launch of iTunes in Europe has taken longer than anticipated. The service is now not expected to launch in Europe until the end of the year and Napster is pushing hard to launch in the territory first. In the UK, MyCokeMusic and services such as HMV and Virgin are beginning to get a foothold in the market with established brands.

Determination

Apple's determination to stick with an audio format which only it uses, could also have long term consequences. An increasing number of download services, including those run by OD2, currently Europe's most popular online music site, use Microsoft's Windows WMA format, which cannot be played on Apple iPods. Apple's iTunes can convert WMA files to its own format, but not WMA files downloaded from music sites. The iPod has proved very popular in Europe and many owners feel frustrated that they cannot buy many songs online which will work on the device. There is also a wider concern for the industry. Despite the success of iTunes and Napster and a crackdown on online piracy, file-sharing of copied tracks remains a huge problem. According to a recent study, the number of US adults downloading music, most of it copied songs, has climbed by 27% during the past three months.

iPhone & iTunes App Store

Turning Cell Phones On Their Ear

By Peter Burrows, Roger O. Crockett, Cliff Edwards, Stephen H. Wildstrom, and Arik Hesseldahl

His usual smooth voice turned raspy, Steve Jobs nonetheless radiated the satisfied glow of a man who had just pulled off a bravura performance before a packed house at San Francisco's Moscone Center. In his hand was his latest gem: a combination phone/music player/Web browsing device called the iPhone. Tapping on its sleek, candy-bar-size screen, Jobs conjured up Wall Street's verdict: "Let's see, Apple's stock is up...8%!" he said matter-of-factly. "Now let's look at RIM [cell-phone rival and BlackBerry maker Research in Motion]. Hmm, it's down 7%."

Look out--here comes another genre-busting gadget from Jobs and the newly named Apple Inc. Despite the iPhone's high starting price of \$499, Jobs is promising to turn the cell-phone business on its ear. That's no idle threat, coming from the guy who paved over the personal computer's awkward interface of arcane commands with easy-to-use graphic icons in the 1980s. Apple also set the tone for the digital music market when it brought out the iPod in 2001, sweeping away a clutter of clunky, hard-to-use players.

Drop the "Computer"

Now, Jobs aims to leapfrog rivals with a device that offers a similar panoply of capabilities to other high-end "smart phones" like the BlackBerry and Palm's Treo--minus the frustrating complexity that has turned away mainstream consumers. "The problem is that they're not so smart, and they're not so easy to use," Jobs told the adoring Macworld crowd.

Here's why the iPhone should scare the daylights out of phone makers: Despite Apple's announcement that it was dropping "Computer" from its name, there's more computer in the iPhone than just about any other smart phone out there. It runs a slimmed-down version of the Mac OS X software found in every Mac PC. And it's a lot easier for Apple to add phone features to a mobile computer than it is for a handset maker to move the other way. If the iPod helped people take all their music with them anywhere, the iPhone promises to cut the moorings from a whole new swath of digital activities, from e-mail to video entertainment. "This clearly underlines the fact that we are entering a new phase of computing," says Seamus McAteer, co-founder of the market research firm M:Metrics Inc. "Mobile phones are becoming full citizens in the computer world."

The iPhone could set a new standard for the universal digital device when it goes on sale in June. An ingenious interface lets the phone play many roles. Gone is the keyboard, the usual mess of tiny keys and cryptic buttons, replaced by a touch-sensitive 3.5-inch screen.

But if the iPhone is to be truly revolutionary, it must also crack open the power structure of the cellular industry. That will be a much tougher nut. Today, most consumers choose a carrier, then pick from various phones that are compatible with its network. Apple created the online music infrastructure in an environment where the established market had been disrupted by file sharing (remember Napster?). But the wireless phone industry is completely different, with strong incumbents. And unless Apple drops the price, iPhone may not appeal to enough buyers to seriously disrupt the industry. There's also the little issue of whether Apple can wrest the iPhone name away from Cisco Systems Inc.

Still, Apple's rethinking of the phone may spur the whole industry to deliver on its many visions of an easy-to-use, universal digital device. This has been an ongoing struggle for Motorola Inc., even while it was scoring a major hit with its slick-looking RAZR. CEO Edward J. Zander is now pushing simplicity. His new RIZR Z6 model, due out midyear, will let users download a song, send photos, or leap to the Web in a click or two, down from about six with current phones. "Wouldn't it be great to have an easy-to-use, same-as-your-PC mobile device in your pocket?" Zander asked an audience at the Consumer Electronics Show in Las Vegas on Jan. 8.

Sure--but it sounds like the iPhone. If it really catches fire and Cingular Wireless, Apple's exclusive U.S. partner, benefits from the relationship, other carriers may have to rethink their strategy. Instead of pushing their mobile services such as movies and music, they might let handset makers and content partners control more applications that lead to greater data usage. The iPhone's capabilities also could help spur Cingular's sales of other services, from photo sharing to basic three-way calling.

It's still six months before Jobs's latest brainstorm hits stores. But already it is delivering the phone industry a wake-up call.

A Stroll Through the iPhone App Store

By Stephen H. Wildstrom

Hundreds of non-Apple programs are available already, and the party has just begun

For all the frenzy it generated, the new iPhone 3G was actually the second most important product launched by Apple on July 11.

The real action was the opening of the iPhone App Store, featuring more than 500 third-party applications for the device. As I wrote [in a recent column](#) (*BusinessWeek*, 6/18/08), software, not hardware, is what separates the iPhone from the pack. The App Store will turn that gap into a gulf.

The phone itself reflects a fairly minor overhaul of the original. The big improvements are fast 3G data networks, a GPS receiver for location services, and a new pricing structure that cuts the tab in half, to \$200 (\$300 for the 16-gigabyte version) in exchange for an extra \$10 a month for the required two-year AT&T service contract.

Apps in Demand

Apple isn't the first to figure out that you need great applications to realize the full potential of a smartphone. Palm built up a corps of outside programmers years ago, and Windows Mobile, Symbian, and BlackBerry products all flourished with the help of extensive third-party software offerings. The iPhone, however, provides a unique combination of an extremely capable device, millions of customers hungry for ways to expand its usefulness, and an enthusiastic (crazed, one could say) community of developers. And the iPhone App Store offers both one-stop shopping and a measure of quality control, though many programs in the initial batch are buggy.

About a quarter of the apps are free, and most others cost less than \$10. They cover a wide range, from the odd (the text of René Descartes' *Discourse on Method* for 99¢) and the serious (a program that can access "business analytics" in Oracle databases) to some very entertaining games.

The built-in programs have also been upgraded. For example, the new iPhone supports Microsoft's corporate Exchange mail and scheduling service. And if your company offers a Microsoft feature called ActiveSync Direct Push, messages, calendar changes, and other data are delivered nearly instantly to the iPhone even when you're not on your corporate Wi-Fi network.

Missing: Real-Time Navigation

Games show off the iPhone's capabilities. Sega's addictive Super Monkey Ball (\$10) and Fullpower Technologies' MotionX-Poker (\$5) are two that highlight its 3D graphics. Users control both of them primarily by tilting or shaking the phone to activate motion sensors. Unfortunately, games also suck power and leave you longing for a replaceable battery.

The addition of GPS enables all sorts of novel services, such as Loopt (a freebie), which keeps your friends posted on your location unless you tell it not to. But one application is prominently missing from the iPhone: turn-by-turn navigation, which is available on most GPS-equipped handsets. Apple's third-party developer agreement prohibits real-time navigation programs, so for now, the most you can get is GPS-enabled Google Maps, which accurately display your current location. Apple has not responded to my questions about its restrictions on navigation, which seems like an ideal feature for the iPhone.

One quibble is that all these applications create a need for some way to organize them. You can move the icons representing the apps around on the iPhone's screen, but you can't put them into folders or any sort of hierarchy. Apple reported 10 million application downloads in the first weekend, so there are some awfully messy home screens out there. Clutter aside, there have been few reports of download or software-compatibility problems.

The volume just proves the App Store is offering lots of programs people want. The original iPhone was a platform that cried out for creative ways to use it. The App Store is a huge step toward realizing that potential.

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iPad

The iPad Threat to PCs

By Arik Hesseldahl

Apple's new computer could erode sales of netbooks and tablet devices sold by PC makers, analysts say

Apple's new iPad, a lightweight device that browses the Web and delivers media, may serve as an alternative to netbooks and pose a threat to PC makers.

While the iPad is not a full-fledged PC, it's capable of handling many of the tasks consumers deem important in netbooks, stripped-down notebooks that have surged in popularity in recent years. In a lightweight package, the iPad provides access to e-mail, the Internet, and digital media such as electronic books. The cheapest version of the iPad will sell for \$499, compared with about \$400 or less for many kinds of netbooks. "People who are looking at netbooks will also take a very serious look at the iPad," says Charles Smulders of market research firm Gartner.

That could spell trouble for computer makers such as Hewlett-Packard, Acer, and Dell, which relied on netbooks for growth in recent quarters as consumers and companies delayed purchases of more expensive machines. The number of PCs shipped rose 15.2% in the fourth quarter, compared with a decline of 0.4% a year earlier, according to research firm IDC. "A substantial portion" of that growth came from the sales of netbooks, says IDC analyst David Daoud.

Silver Lining: Margin Squeeze May End

If there's a silver lining in the iPad's introduction, it's that PC makers may need to boost their reliance on higher-priced devices, analysts say. Sales of netbooks can put pressure on average selling prices that if unchecked can lead to narrower margins. "The netbook market has created a race to zero margins," Forrester analyst James McQuivey says. "It has created a market where higher-priced, higher-margin notebooks have a harder time selling because consumers think they can get essentially the same experience in a netbook with a lower price."

So if netbook growth slows, PC vendors may need to refocus their efforts on selling higher-margin traditional notebooks, says Daoud of IDC. "It will bring some needed sanity and new alternatives for the PC industry," Daoud says. "For so long, all they could do was drive down prices. Now they can think outside the box and bring out devices that will compete with Apple at prices they can live with."

Sumit Agnihotry, a vice-president at PC maker Acer, which sells several netbooks, says the smaller computers will probably keep their place in the PC industry. "The industry has proven that the netbook is an important category," he says. "We think they're here to stay." Still he says Acer is working on a tablet product that will compete head-to-head with Apple's iPad. It's due to be announced in the second half of 2010.

iPad Will Tempt PC Tablet Users

Apple's iPad may also make a dent in sales of existing tablet-style computers, a category that has been available for the better part of a decade but failed to catch on with consumers. Only about 1.03 million tablets were sold in 2009, down from 1.3 million in 2008, according to Gartner. Tablets are generally aimed at businesses that have a specific need for a PC that accepts input from a pen-shaped stylus. Though the iPad doesn't use a stylus, there's a good chance that its thin, lightweight body could lure some business users away from their tablets.

Harry Labana is chief technology officer of Citrix Systems, which makes software that gives mobile devices, including Apple's iPhone, the ability to access software and files on other computers remotely. He sees opportunity for sales of the iPad in areas such as medicine. For example, doctors who want to view patient records or X-ray images can do so from a device like the iPad that connects remotely to another computer where patient files are stored. "Not everyone who spends their work day walking around needs a full-power laptop or a PC to read certain data or to send mail," he says.

Hewlett-Packard introduced a tablet it calls the Slate at the Consumer Electronics Show in Las Vegas in early January. "The slate category is exciting and will be the focus of multiple efforts on several platforms in the industry," says HP spokeswoman Marlene Somsak. "We'll have a number of products in this space this year and beyond." She declined to comment specifically on the iPad. A spokeswoman for Dell declined to comment.

Apple says it expects to start shipping the iPad by the end of March. The company may sell 3 million to 4 million in the first 12 months it's available, says Gene Munster, an analyst at Piper Jaffray. It may sell 8 million iPads in 2011, he says.

Hesseldahl is a reporter for *Bloomberg BusinessWeek*.

Apple's Current Value

Apple Passes Microsoft as No. 1 in Tech

By Miguel Helft and Ashlee Vance

SAN FRANCISCO — Wall Street has called the end of an era and the beginning of the next one: The most important technology product no longer sits on your desk but rather fits in your hand.

The moment came Wednesday when Apple, the maker of iPods, iPhones and iPads, shot past Microsoft, the computer software giant, to become the world's most valuable technology company.

This changing of the guard caps one of the most stunning turnarounds in business history for Apple, which had been given up for dead only a decade earlier, and its co-founder and visionary chief executive, Steven P. Jobs. The rapidly rising value attached to Apple by investors also heralds an important cultural shift: Consumer tastes have overtaken the needs of business as the leading force shaping technology.

Microsoft, with its Windows and Office software franchises, has dominated the relationship most people had with their computers for almost two decades, and that was reflected in its stock market capitalization. But the click-clack of the keyboard has ceded ground to the swipe of a finger across a smartphone's touch screen.

And Apple is in the right place at the right time. Although it still sells computers, twice as much revenue is coming from hand-held devices and music. Over all, the technology industry sold about 172 million smartphones last year, compared with 306 million PCs, but smartphone sales grew at a pace five times faster.

Microsoft depends more on maintaining the status quo, while Apple is in a constant battle to one-up itself and create something new, said Peter A. Thiel, the co-founder of PayPal and an early investor in Facebook. "Apple is a bet on technology," he said. "And Apple beating Microsoft is a very significant thing."

As of Wednesday, Wall Street valued Apple at \$222.12 billion and Microsoft at \$219.18 billion. The only American company valued higher is Exxon Mobil, with a market capitalization of \$278.64 billion.

The companies have comparable revenue, with Microsoft at \$58.4 billion and Apple at \$42.9 billion. But in their most recent fiscal years, Apple had net income of \$5.7 billion, while Microsoft earned \$14.6 billion.

Microsoft has more cash and short-term investments, \$39.7 billion, to Apple's \$23.1 billion, which makes the value assigned by the market to Apple, essentially a bet on its future prospects, all the more remarkable.

Microsoft's chief executive, Steven A. Ballmer, shrugged off the shift Thursday morning. "No technology company on the planet is more profitable than we are," he said in New Delhi, where he had come to tout Microsoft's cloud computing plans.

"On any given day, the stock market is a voting machine," he said, and only "in the long run is it a weighing machine."

Apple declined to comment.

Apple's climb to the top of the heap cements the reputation of Mr. Jobs, who once operated in the shadow of Microsoft's co-founder, Bill Gates.

"It is the single most important turnaround that I have seen in Silicon Valley," said Jim Breyer, a venture capitalist who has invested in some of the most successful technology companies.

While Apple is at the top of its game, it faces a new and powerful rival in Google, which is battling Apple in mobile devices with its Android operating system, and mobile advertising.

Google, with a market cap of \$151.43 billion, also appeared to leap ahead of Apple in a new potentially important area, Internet-connected televisions. And Google is steering consumers toward yet a new model of computing in which Internet applications, rather than iPhone or desktop applications, rule.

“The battle has shifted from Microsoft against Apple to Apple against Google,” said Tim Bajarin, a technology analyst who has been following Apple since 1981. “Apple has a significant lead. But Google is going to be a powerful competitor.”

Apple and Microsoft initiated the personal computing revolution in the late 1970s, but Microsoft quickly outflanked Apple and grew to be one of the most profitable businesses ever created.

A little more than a decade ago, Apple, which had pushed out Mr. Jobs in 1985, was widely believed to be on the path to extinction.

Michael S. Dell, the founder and chief executive of Dell computer, went so far as to suggest that Apple should shut down and return any money to shareholders. (The computer maker is now worth about a tenth of Apple.) Around the same time, Microsoft’s chief technology officer called Apple “already dead.”

But with the return of Mr. Jobs to Apple in 1996 — and an investment by Microsoft of \$150 million — the company began a slow path to recovery. Apple’s rebirth began in earnest with the introduction of the iPod music players, and Mr. Jobs began to gain a reputation for anticipating what consumers want. The company elbowed aside Sony and came to dominate the music distribution business with the iTunes online music store.

It later upstaged Nokia, the dominant brand in mobile phones, by introducing the iPhone in 2007. And this year, Mr. Jobs shook things up again, with the introduction of the iPad, a tablet computer that has the potential to create a new category of computers and once again reshape the way people interact with their devices.

Mr. Jobs helped create “the best desktop computer, the best portable music device, the best smartphone and also now the best tablet,” said Steve Perlman, a serial entrepreneur who was an executive at both Apple and Microsoft and is now the chief executive of OnLive, an online gaming company.

As Apple grew increasingly nimble and innovative, Microsoft has struggled to build desirable updates to its main products and to create large new businesses in areas like game consoles, music players, phones and Internet search. Microsoft, which is a component stock of the Dow Jones industrial average, has lost half its value since 2000.

Mr. Ballmer said Thursday that while Microsoft has “some very good competitors,” the company is a very good competitor itself. Yet Mr. Ballmer seemed to concede that Microsoft needs improvement in some areas.

“Windows phone – boom! We have to deliver devices with our partners this Christmas,” he said. Feedback so far has been good, he said, but the company still has “a lot of work to do.”

Still, Microsoft is a hugely powerful and profitable company in the tech world. Its Windows software runs 9 out of every 10 computers, while more than 500 million people use its Office software to perform their daily tasks, like writing letters or sending e-mail messages. These two franchises account for the bulk of Microsoft’s annual revenue.

But Apple has the momentum. “Steve saw way early on, and way before Microsoft, that hardware and software needed to be married into something that did not require effort from the user,” said Scott G. McNealy, the co-founder and longtime chief executive of Sun Microsystems.

“Apple’s products are shrink-wrapped and ready to go.”

Apple is the Most Valuable Company

By Nick Bilton

NYT Blogs

In 1996, Apple Computer, the venerable founder of the personal computer, was struggling to stay afloat.

Now, 15 years later, **Apple is the most valuable company** in the world in terms of market capitalization.

On Tuesday, the maker of iPhones, iPads and Macs, passed Exxon Mobil, the energy company, to take the title as the stock market's most valued company. At 2:30 p.m., Apple's stock was \$366.62, up \$10.66, or 3.02 percent, giving it a market valuation of \$337.11 billion. Exxon Mobil was \$68.90, down \$1.45, or 2.07 percent, with a market valuation of \$333.54 billion, nearly \$4 billion less than Apple.

Just three weeks ago Apple was \$50 billion shy of being crowned with the title of the world's most valuable company. But that was before oil prices started falling and a broad stock market sell-off that drove Exxon's stock price down faster than Apple's fell.

"This all goes back to Apple's distillation when it changed its name from Apple Computer, to Apple, and their role as a technology influencer in everything we touch," said Charles Golvin, an analyst specializing in mobile technology for Forrester Research. "Over the years Apple has become a massive force on our digital lifestyles, and they way that we connect with each other."

Much of Apple's revival can be credited to Steven P. Jobs, the company's co-founder and chief executive. Mr. Jobs, who left Apple in 1985 to start NeXT Computers, rejoined Apple in 1997, reorganizing the company's focus, product line and management team.

- * [Apple Closer to Most Valuable Company Title](#)
- * [World's Most Valuable Company? Apple Has \\$50 Billion to Go](#)
- * [Adobe, Creator of Flash, Embraces HTML5](#)
- * [Tech Talk Podcast: Lion](#)
- * [City Room: Apple's Plans for Grand Central Terminal](#)

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Appendix

Apple Revenue by Products (4Q 2007 – 2Q 2011)

CHART OF THE DAY: The Evolution Of Apple's Business

By Jay Yarow and Kamelia Angelova

The iPad is already the second biggest part of Apple's business as measured by revenue after less than two years on the market. In the June quarter, the iPad generated \$6 billion in revenue versus the Mac which generated \$5 billion. The real story for Apple continues to be the iPhone which did \$13.3 billion in sales for the quarter. The iPhone and iPad are now 66% of Apple's sales, impressive considering how relatively new the products are.

