

all about Steve Jobs.com



Steve Jobs

a biography by Romain Moisescot

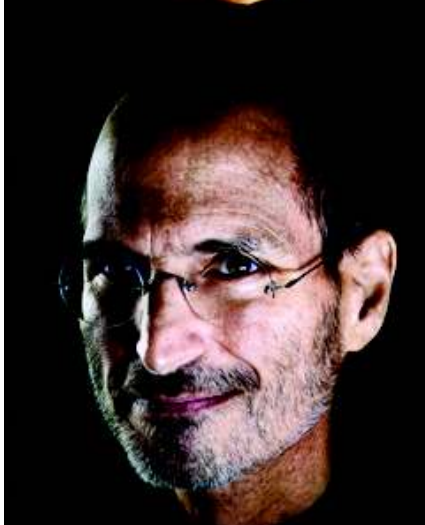


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Youth

The Jobs family

Steve Jobs was born on February 24, 1955, in the city of San Francisco. His biological mother was an unwed graduate student named Joanne Simpson, and his biological father was either a political science or mathematics professor, a native Syrian named Abdulfattah John Jandali.

Being born out of wedlock in the puritan America of the 1950s, the baby was put up for adoption. Joanne had a college education, and she insisted that the future parents of her boy be just as well educated. Unfortunately, the candidates, Paul and Clara Jobs, did not meet her expectations: they were a lower-middle class couple that had settled in the Bay Area after the war. Paul was a machinist from the Midwest who had not even graduated from high school. In the end, Joanne agreed to have her baby adopted by them, under the firm condition that they later send him to college.

Paul and Clara called their new son Steven Paul. While Steve was still a toddler, the couple moved to the Santa Clara county, later to be known as Silicon Valley. They adopted another baby, a girl called Patti, three years later in 1958.

Childhood



Steve was quite a turbulent child. He really didn't care about school for some time — until he reached the 4th grade, and had Imogene "Teddy" Hill as a teacher.

She was one of the saints of my life. She taught an advanced fourth grade class, and it took her about a month to get hip to my situation. She bribed me into learning.

She did bribe him, with candy and \$5 bills from her own money. He quickly became hooked — so much so that he skipped the 5th grade and went straight to middle school, namely Crittenden Middle School. It was in a poor area. Most kids did not work much there, they were rather fond of bullying other kids, such as the young Steve. One day he came home and declared that if he wasn't transferred to another school, he would stop going to school altogether. He was 11. Paul and Clara complied, and the Jobses moved to the cozier city of Los Altos, so that Steve could go to Cupertino Junior High. This proved to be decisive for Steve's future.

The Birth of Silicon Valley

The Santa Clara county, south of San Francisco, California, was a burgeoning place for computer engineering as early as the 1960s. Indeed, after the Soviet Union launched Sputnik in 1957, the country engaged in the Space Race, and billions of dollars of federal money were poured into technology companies to advance the state of the art of computing. One of those firms was the Shockley Semiconductor Company, from William Shockley, who got the Nobel Prize of Physics in 1956 for inventing the transistor. Another dominant firm was Hewlett Packard, founded in Palo Alto in 1939. HP was a company of engineers, selling products to engineers. There were tons of them scattered all over this valley of apricot orchards.

As Steve was growing up in Los Altos, he became increasingly curious about the world of electronics that filled his neighbors' garages. His own father introduced him to Heathkits, which fascinated him:

These Heathkits would come with these detailed manuals about how to put this thing together and all the parts would be laid out in a certain way and color coded. You'd actually build this thing yourself. I would say that this gave one several things. It gave one a understanding of what was inside a finished product and how it worked because it would include a theory of operation but maybe even more importantly it gave one the sense that one could build the things that one saw around oneself in the universe. These things were not mysteries anymore. I mean you looked at a television set you would think that "I haven't built one of those but I could. There's one of those in the Heathkit catalog and I've built two other Heathkits so I could build that." Things became much more clear that they were the results of human creation not these magical things that just appeared in one's environment that one had no knowledge of their interiors. It gave a tremendous level of self-confidence, that through exploration and learning one could understand seemingly very complex things in one's environment. My childhood was very fortunate in that way.

Computerworld/Smithsonian Interview, 20 Apr 1995

Homestead High



Mr. McCollum's Electronics 1 class. Steve is well recognizable in the middle.

When Steve arrived in Homestead High School, he enrolled in a popular electronics class. His teacher was Mr. McCollum. McCollum later recalled of one time when his pupil Steve called up David Hewlett himself, co-founder of HP, to get spare parts for his homework, and even a summer job at HP's factory. Steve's entrepreneurial skills showed up early in his life indeed.

At Homestead, Steve befriended Bill Fernandez, a neighbor who shared his interests in electronics. It was Bill who first introduced him to another computer whiz kid, an older guy named Stephen Wozniak, or — as everybody used to call him — Woz. Steve and Woz met in 1969, when they were respectively 14 and 19. At the time, Woz was building a little computer board with Bill Fernandez that they called *"the Cream Soda Computer"*. Woz showed it to Steve, who seemed quite interested.



Woz and Bill Fernandez with the huge middle finger flag they put on Homestead High School with Steve Jobs in 1971

Typically, it was really hard for me to explain to people the kind of design stuff I worked on, but Steve got it right away. And I liked him. He was kind of skinny and wiry and full of energy. [...] Steve and I got close right away, even though he was still in high school [...]. We talked electronics, we talked about music we liked, and we traded stories about pranks we'd pulled.

Steve Wozniak in *iWoz*

Woz and Steve later engaged in several pranks together, including putting a huge middle finger on one of the high school's building.

It was also at Homestead that Steve met Chris-Ann Brennan, his first steady girlfriend, with whom he stayed for several years.

A couple of years later, Woz and Steve started their first entrepreneurial venture. It was 1972, and on US campuses, there was a lot of talk about "phone phreaks." They were early computer hackers that managed to build "blue boxes" — little devices that fooled AT&T's long-distance switching equipment, and allowed you to make phone calls for free.

Woz read about them in an article which he showed to Steve. They both tried to build one, and to their surprise, it worked! It was Steve who came up with the idea of selling them; he and Woz would go from room to room in Berkeley's dorms, where Woz was a student, and sell them to interested students. However, this business was illegal and the two of them stopped after they almost got caught by the police.

Reed College

The following year, Steve finished high school and reached college age. He decided to go to the fancy Reed College, a private liberal arts college up in Oregon. However, the tuition for Reed was so expensive that Paul and Clara could hardly afford it. Yet they were bound by the promise they'd make to their son's biological mother, so they spent almost their entire life's savings on their son's higher education.

Steve only officially stayed for a couple of months at Reed. He dropped out before Christmas. However, that allowed him to "drop in" on classes he was not supposed to attend.

After six months, I couldn't see the value in it. I had no idea what I wanted to do with my life and no idea how college was going to help me figure it out. And here I was spending all of the money my parents had saved their entire life. So I decided to drop out and trust that it would all work out OK. It was pretty scary at the time, but looking back it was one of the best decisions I ever made. The minute I dropped out I could stop taking the required classes that didn't interest me, and begin dropping in on the ones that looked interesting.

It wasn't all romantic. I didn't have a dorm room, so I slept on the floor in friends' rooms, I returned coke bottles for the 5¢ deposits to buy food with,

and I would walk the 7 miles across town every Sunday night to get one good meal a week at the Hare Krishna temple. I loved it.

Stanford Commencement Address, 12 June 2005



It was at Reed that Steve started experimenting with Eastern mysticism. He delved into weird books and came to believe that if he ate only fruits, for example, he would eliminate all mucus and not need to shower anymore. He also started his habit of fasting for long periods of time (he would still do so ten years later, when he was a multi-millionaire). He occasionally used LSD, and became something of a laggard hippie. One of his best friends at Reed was Dan Kottke, who shared his interests in such philosophies.

The following year, in 1974, Steve desperately needed money, so he got a job at Atari. Atari was arguably the first video game company: it was created by Nolan Bushnell in 1972, and one of its first employees was Al Acorn, the inventor of Pong. Steve was hired although he would often call his co-workers names and smell pretty bad. That's why he was soon moved to the night shift.

Young Steve Jobs looked up to Atari's founder Nolan Bushnell. He was impressed by this iconoclastic man who made a lot of money by building pinball machines. He was clearly an inspiration for him to start Apple.

India

While he was at Atari, Steve asked his boss to fund a trip to India for him. Atari did pay his trip up to Germany, where he had to work on fixing some Atari machines. Then Steve was joined by his hippie friend from Reed, Dan Kottke, and they went to India in search for enlightenment. They came back pretty disappointed, especially after they met a famous guru, Kairolie Baba, who, unlike what they expected, was a con man.

We weren't going to find a place where we could go for a month to be enlightened. It was one of the first times that I started to realize that maybe Thomas Edison did a lot more to improve the world than Karl Marx and Neem Kairolie Baba put together.

quoted in Michael Moritz's *The Little Kingdom*

When Steve came back, he resumed his job at Atari. One of his pastimes back then included primal scream therapy sessions at the Los Altos Zen Center, where he befriended Governor Jerry Brown and his new guru Kobun Chino. He also spent several weeks with his girlfriend Chris-Ann and Dan Kottke in a hippie commune in Oregon, the All-One Farm. Here they would cultivate apples and for some time, Steve would eat only that — when he wasn't fasting, that is.

The Apple I

Homebrew

While Steve had been away in India or Oregon, his geek friend Woz had been hired by Hewlett-Packard. To him, it was a dream job: a company full of passionate engineers just like him, where he could work on products for other engineers. However, in his spare time, he had cultivated his interest in designing computer circuits, and had joined a computer hobbyists association called the Homebrew Computer Club.

The Emergence of Personal Computing

Computers existed for a long time before Apple was started. For example, arguably one of the first full-blown US computers ever built was ENIAC, in 1946. By the 1970s, the majority of large corporations were already equipped with computers. But at the time, those were usually huge mainframes in giant computer rooms, built and maintained by industry behemoth IBM — which was itself founded as early as 1899.

Personal computing was based on a radically different approach. It claimed that computers could be used by mere mortals, private individuals instead of institutions. It was a revolutionary idea, and it's no surprise it emerged in the Bay Area in the 1970s, after the hippie revolution and at the heartland of the electronics industry.

It all started in 1974, when Mountain View-based Intel introduced the world's first microprocessor, the 8080. All sorts of hobbyists started to get interested in how to use this powerful yet relatively cheap new piece of technology. A huge leap forward was made when a man named Ed Roberts launched the Altair, out of Albuquerque, New Mexico. It was a computer kit based on the 8080, which people could assemble by themselves, a lot like the Heathkits Steve Jobs worked on in his childhood.

The Altair was basically a box that could flash lights on and off. It didn't do much until Bill Gates and Paul Allen, who had just founded a new company called Microsoft, wrote a BASIC interpreter for it in 1975. The word spread around all over the country in those personal computing circles (which mostly consisted of engineers, radio amateurs and other types of nerds). The Homebrew Computer Club, which operated from Stanford's Linear Accelerator Center auditorium, was one of those groups. Hobbyists would go there to show off their latest machine or program they had worked on, to be used on the Altair or other early



The Homebrew Computer Club

Woz was impressed by the Altair (and by Microsoft's BASIC interpreter), but he knew from his almost life-long experience in circuit design that he could do a much better job. So he started work on his own computer — which he decided to base on another microprocessor, MOS's Technology 502. This was his new goal in life. While keeping his job at HP, he worked very hard at

this computer board, and came up with an impressive result; a powerful computer (for the time) which worked with a keyboard and screen, not one that flashed lights — and all with amazingly few chips.

Woz showed his computer design to his friend Steve Jobs. Steve was impressed. He did not know much about engineering, but he could see there was a demand for having a computer to write software for, a computer for software hobbyists. He was especially excited to see that a lot of the qualified engineers at Homebrew were talking about Woz's computer with admiration. So he suggested to sell it to them. He and Woz would assemble the computers themselves and sell the whole board at Homebrew meetings.

“Our own company”

Steve had a good argument. We were in his car and he said — and I can remember him saying this like it was yesterday: “Well, even if we lose money, we’ll have a company. For once in our lives, we’ll have a company.” That convinced me. And I was excited to think about us like that. To be two best friends starting a company.

Steve Wozniak in *iWoz*

To get the necessary \$1,000 to start building the first boards, Steve sold his Volkswagen van, and Woz his HP 65 calculator. They thought about how to call the new company, and couldn't come up with a good name, until one day, Steve said that they would call it Apple if they didn't find anything better. And they didn't — so Apple Computer was born.

The two friends sought help, and they got it from one of Steve's colleagues from Atari, Ron Wayne. Wayne basically wrote the necessary paperwork to start a corporation — and drew the company's first logo. As a result, he got 10% of the company's shares, while Steve and Woz split the rest (45% each).

Another problem was that Woz was still working for HP, and under the terms of his contract, all his work belonged to the corporation. The Apple computer was technically HP property. But Woz showed it to his bosses and they simply didn't care about it. Woz was disappointed as his goal was to work for HP his whole life. He would have been delighted if HP had done a personal computer based on his design. It wasn't Steve Jobs' intention though.

Apple Computer's first order was from a Homebrew member called Paul Terrel. He was starting a new computer store called the Byte Shop, in Mountain View, and understood just like Steve that there was a demand for such fully-built computers. He ordered 50 of them, at \$500 a piece. That was \$25,000! It was a huge starting point for the young company, and got Steve and Woz very excited. They started putting together the parts in the Jobses's garage, with help from Steve's sister Patti and his friend from Reed, Dan Kottke. They paid them \$1 a board. The parts for the Apple cost \$220,



while the computer was sold to Terrel for \$500, who would usually put it in wooden boxes.

Steve and Woz also started selling the computer on their own. They agreed on the retail price of \$666.66 (note that his price was based on a simple calculation — a 33% margin — and had nothing to do with the Satanic number of course). They showed it to the Homebrew folks in March 1976, but the response wasn't that enthusiastic. So they went elsewhere, going from store to store and trying to sell them. They sold a couple hundreds this way.

This was the start of Apple Computer. Steve and Woz had bought the other co-founder Ron Wayne out for \$800, and incorporated the company on April 1, 1976.



An Apple I computer inside a wooden box

Apple's early days

The day he finished work on his first computer, Woz started working on an improved design, the future Apple II. The Apple II was based on the Apple I's design, but in many ways it was a huge breakthrough.

First, it ran a lot faster with half as many chips. It also was the first computer that could produce color, with any color TV you would plug it into. It could handle high-resolution graphics and sound, and had a BASIC interpreter built-in. In short, it was the first computer that anybody who knew the BASIC programming language could use: it had what it took to launch the personal computing revolution.



Dan Kottke and Steve at the Personal Computing Festival

The prototype for the Apple II was almost ready when Steve and Woz partook in the Personal Computer Festival, held in Atlantic City in the summer of 1976. But it was not ready enough to be shown to the public. Steve and his friend Dan Kottke were trying to sell the Apple I from their Apple Computer booth, while Woz was working on finishing the Apple II. The visitors were not impressed by the Apple I, a board sold by two amateur bearded young men, while MITS, which sold the Altair, had a huge booth with music, dancers and business suits. Steve learned a lot that day.

After the Apple II was finished, Steve went looking for investors. He talked to several venture capitalists, who were already legions in the Valley. The first to show up was Don Valentine. He turned Steve and Woz down, but he did give them a hand by passing them the name of another potential investor, Mike Markkula. Mike was a former Intel employee who had made millions and retired early. He was 34 when he met with Woz and Steve, and he bought into their vision. He was also quite aware of the potential returns on his investment:

We're going to be a Fortune 500 company in two years. This is the start of an industry. It happens once a decade.

Mike Markkula to Steve and Woz, quoted in *iWoz*

Mike drew up a business plan. He wanted to put in \$250,000 to build 1,000 machines. This was a huge number by the young men's standards. Woz was also told that for this to happen, he had to leave HP. At first he refused, since he was a huge admirer of HP and planned to work there his whole life. But Steve lobbied him hard into it, and in the end Woz relented.

Mike Markkula also insisted that Apple advertise for its new computer. He called up one of his friends, Regis McKenna, who was one of the most renowned advertisers in the Valley. While they worked with Steve Jobs on Apple's first ads, an art director called Rob Janoff designed a new logo for the company. The only thing Steve asked him was: *"Don't make it cute."* He was the one who came up with the bitten apple (so that it wouldn't look like a tomato), as well as the striped colors — to emphasize the Apple II's ability to display color.

Rod Holt, a friend of Steve Jobs', was hired to build a switching power supply and design a mold for the Apple II's plastic case. Mike Markkula later also hired a fourth guy, Mike Scott, to run the startup, whose first offices were moved to Stevens Creek Boulevard in Cupertino.



Steve and Mike Markkula in front of Apple's new logo

The West Coast Computer Faire



Steve demoing the Apple II at the West Coast Computer Faire

The new company got ready to show off their product at the West Coast Computer Faire, a conference held in San Francisco in April 1977. It was only a prototype, but the plastic case definitely made the Apple II look like a professional product. Steve negotiated a prime spot for Apple's booth, and took precious advice from both Mike Markkula and Regis McKenna. That's why he bought his first suit for the occasion.

My recollection is we stole the show

Steve Jobs in Triumph of the Nerds

Apple Computer received 300 orders for the Apple II on the show alone, twice as much as the total number of Apple I's ever sold! But this was just the beginning.

Success and failures

The personal computing revolution



In many ways, the Apple II was both the start and the symbol of the personal computer revolution of the early 1980s. Although there were many competing personal computers on the market — such as the Commodore PET or Radio Shack's TRS-80 — the Apple II clearly set itself apart very early on, and soon embodied the personal computer in the public consciousness. It was all over the media, and its sales skyrocketed throughout 1978, 1979 and 1980.

It was not only about the Apple II's appealing design, its integrated keyboard, or its ability to plug into any TV to display color graphics or play sounds. Its built-in BASIC interpreter was also critical to its success, as it made the writing of compatible software very easy. Woz used it himself to write the first program to ever run on the machine, a game called Breakout. The eight expansion slots in Apple II made a difference, too. Woz decided to implement them against Steve Jobs' will, and this proved a wise move, as they allowed for all kinds of new features and software to be added to the machine. One of those features was Disk II, a floppy disk drive Apple started shipping in early 1978. It made the sharing and installing of new software very easy — soon the supply of Apple II software was thriving.

But probably the most important push toward the Apple II's success was not from Apple. It was a piece of software called VisiCalc — the first spreadsheet ever brought to market. VisiCalc worked only on the Apple II, and it was a revolution in itself. Millions of accountants, small businesses, or even private individuals that cared about their money, could now do in minutes calculations that would have taken them weeks to perform by hand. They rushed out to computer stores and bought Apple IIs en masse, making Apple one of the most profitable companies of its day. Only four years after it was started in a garage, the company was well on its way to fulfill Mike Markkula's vision of belonging to the Fortune 500 elite of corporate America.

Preparing for the future

Apple Computer was growing at an incredibly fast rate. The numbers were mind-blowing: from 2,500 Apple IIs sold in 1977, 8,000 were sold in 1978, and up to 35,000 in 1979. Remember there was no market for personal computers before! The company earned \$47 million in revenues in fiscal year 1979, making Steve Jobs a millionaire on paper (he owned \$7 million worth of private stock). The company's board of directors, including its new members such as Arthur Rock and Don Valentine, began to discuss taking Apple public.

Meanwhile, the engineers in Cupertino started working on Apple's future. Several projects came into being in those early years. First, in late 1978,

there was the Apple III, which was supposed to build on Apple II's legacy. Woz did not partake in the project and was critical of it early on. There was also an obscure project called Macintosh, headed by computer scientist Jef Raskin. He started to assemble a small team to work on a computer "as easy to use as a toaster", that he named after his favorite apple.

Steve Jobs was not involved in any of those projects. He had another one in mind, called Lisa. And he hadn't picked that name without a reason...

Indeed, in 1978, while he was dating an employee of McKenna's PR agency, Steve's ex-girlfriend from high school Chris-Ann Brennan reappeared claiming she was bearing his baby. Steve denied the fatherhood, although everybody in his entourage knew he was the father. The baby girl was named Lisa... there was a lot of perplexity around Steve's behavior, especially since he had suffered greatly from having been abandoned himself. He was going to do the same to his own daughter! Yet, at the very same time, he used the girl's name for a project code name.

Project Lisa took a dramatic turn in late 1979, after Steve's visit to Xerox PARC.



What is Xerox PARC?

The Xerox Palo Alto Research Center, often dubbed Xerox PARC, was started in the early 1970s by the Xerox corporation. Based on the East Coast, the manufacturer of copy machines felt that its core business was threatened by the emerging computer revolution, with its promise of a paperless office. In a very smart move, they set up a research center in Stanford Research Park, and hired talented computer scientists, many from the leading university, to invent the office of tomorrow.

In 1979, when Steve Jobs toured PARC, the researchers had already pioneered several technologies that would revolutionize computing forever. They had a network of computer working together using Ethernet. They had developed object-oriented programming, a new way to write software much more effectively. They were working on the laser printer. But most of all, they had built the world's first computer to use a graphical user interface (GUI), the Alto. The Xerox Alto had a strange device called a mouse, that you could use to move a cursor around the screen. You could open files and folders, copy and paste content inside them. It was simply a breakthrough.

The Xerox PARC did not keep its technology hidden from outsiders. Informed circles knew about the center's advances, especially at Stanford and in the Valley as a whole. Everybody pretty much sensed that this technology would have a huge impact on the industry — everybody but Xerox themselves. The conservative management on the East Coast never grasped the extent of what their researchers in California had come up with. They simply dismissed it as futile.

The Lisa team was briefed about Xerox PARC's technologies by insiders, including Jef Raskin, the manager of the Macintosh project. Steve

negotiated a deal with Xerox to be given a complete tour of the facilities. Here's how he described his experience later:

Within ten minutes, it was obvious to me that all computers would work like this someday.

Steve Jobs in *Triumph of the Nerds*

Several researchers and engineers were lured away from PARC by Apple, such as Larry Tesler and Bruce Horn, to develop a GUI for Lisa. The biggest challenge was trying to design an actual product, not a fancy prototype too expensive to build. After all, one of the reasons Xerox dismissed the Alto was its astronomical price tag: \$20,000! That was twenty times as much as the Apple II.

The biggest IPO since Ford

In 1980, Apple Computer was preparing to go public. This move had several major implications for Steve Jobs, both professionally and personally.

First, the board was concerned about the potential bad publicity around Steve's handling of his daughter Lisa. They insisted that he settled the case with Chris-Ann before the end of the year, as the IPO was scheduled for December 1980. Reluctantly, he agreed to reimburse the country's welfare the money they had spent on the mother of his daughter, i.e. \$20,000.

There was also a large re-organization at the top of the company. The Apple III, which came out in the spring of 1980, had turned out a disaster on the marketplace. It was flawed and thousands of early models had to be returned to the company, whose only revenues still came from sales of Apple II. The next project, Lisa, became even more critical to the company's future. As a result, Apple Computer was re-organized into three new departments: Accessories, Professional Office Systems (which included Lisa), and Personal Computer Systems (Apple II and Apple III). Steve expected to head the POS division, but the board chose the milder and more experienced John Couch. Steve was named chairman of the board instead.

This choice was mostly a public relations scheme in anticipation of the IPO. The company started advertising in the mass media, notably the *Wall Street Journal*, spreading the legend of the technical genius Steve Wozniak, and his friend marketing genius and visionary Steve Jobs starting a revolution from their garage. There were full-page advertisements with pictures of Steve Jobs and the Apple II, in which he was quoted as saying that the personal computer was a new kind of bicycle — a bicycle for the mind.

Steve's personality was transformed during that period. He was increasingly recognized as a national icon, a symbol for the country's new entrepreneurial wave. He was starting to realize his dream of changing the world. His hippie days seemed long gone: he gave up the beard and the



mustache, stopped going to the Los Altos Zen Center, and occasionally wore suits.

Finally, on December 12 1980, Apple went public. Even though the country was in the middle of a recession, the operation was a huge success beyond anyone's expectations. It was the biggest public offering in American history since the Ford Motor Company in 1956! After the IPO, Steve Jobs was worth \$217.5 million, \$210 million more than the day before.

The bozo explosion

However, Steve was still the same inside. He was a tough manager, and a lot of engineers refused to work with him. Apple's executives were well aware of the problem, and it's one of the reasons they named John Couch to run the Lisa project, not Steve.

In particular, Steve had very tense relations with Apple's CEO Mike Scott. Remember Scott was hired by Mike Markkula in 1977 to run the company. But as you will soon see, Scott was perhaps as temperamental as Jobs, if not more.

Indeed, there was a shared concern in Cupertino about the quality of the company's recent hires. The organization had been growing so fast that many people in its workforce obviously did not qualify for their jobs. In a very Steve Jobs fashion, the phenomenon was commonly referred to as "*the bozo explosion*." Mike Scott, nicknamed Scotty, decided it was time to take action. On February 25 1981, a day that would go down in Apple's history as "*Black Wednesday*", he fired half of the Apple II team, without even consulting the board — this was not a way to manage a publicly traded company! The board gathered and decided it was time for Apple to get rid of Scotty. Mike Markkula took his job while the company started looking for a new CEO.



Steve Jobs and Jef Raskin in 1979

The departure of Scotty, one of Steve Jobs' strongest opponents, gave him more freedom at Apple. It wasn't long after that that the young chairman of the board took over the smallest project in the POS division, Jef Raskin's Macintosh. Remember Jef was an older Apple engineer, a very bright, soft-spoken character, who never had much sympathy for Jobs. He had even written a note to Mike Scott to explain why he could not possibly work with Steve (read it in [Steve at work](#)). But the board was willing to sacrifice him to have Steve Jobs let the Lisa project in peace — so they let him go, and installed Steve as new head of the Mac team.

The reasons Lisa was such a strategic product for Apple came from the new face of the PC market. Indeed, in August 1981, the whole industry was shaken by the introduction of the IBM PC. Big Blue was the leader in computing, and had been for several decades — but its only products were mainframes. As they watched the growing success of Apple Computer and their new market, IBM decided it was time to get personal. The IBM PC was

inferior to the Apple II in many ways, but the fact it was from IBM was critical in itself. It made it OK for corporate America to start using PCs: after all, every information systems manager knew *“you couldn’t be fired for buying an IBM.”* Apple’s position as the market leader was clearly threatened — and its only viable product was still the four year-old Apple II. After the failure of Apple III, Lisa looked like the only possible salvation for the fruit company.

Macintosh

Better be a pirate than join the Navy

Steve Jobs quickly left his mark on the Macintosh team. Part of his motivations were: 1. to have his own successful computer, unlike the Apple II which was Woz's brainchild; 2. to take revenge on Apple's management for forcing him out of the Lisa project. When he took over, the Mac team only consisted of a small number of engineers: Brian Howard, Burrell Smith and Bud Tribble, as well as a woman in marketing, Joanna Hoffman. He soon hired several other members that would later form the core of the team, such as Andy Hertzfeld, Chris Espinosa, George Crow, Steve Capps and Mike Boich. Other key players would follow later, like the brilliant software designer Bill Atkinson from the Lisa team, Mike Murray in marketing, or Susan Kare, who designed the icons and several fonts for the system. For the box design, he hired Harmut Esslinger's frogdesign, who pioneered the so-called "Snow White" design language, that would dictate computer design for the next decade.

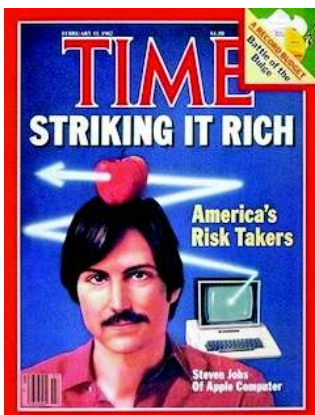


The Mac team's pirate flag. Steve is sitting by the piano.

To Steve, the Macintosh project was going to save Apple from the bloated Lisa project and the bureaucracy of the company. He tried to insufflate the team with entrepreneurial values, calling them rebels and artists, while the other Apple employees were bozos. The team was even in a separate building on Bandley Drive, where Steve hung a pirate flag: "better be a pirate than join the Navy," he said — meaning the Navy was the rest of Apple.

By early 1982, the Macintosh was beginning to be acknowledged as a significant project within Apple, instead of a quirky research effort, but it still remained somewhat controversial. Since the Mac was sort of like a Lisa that was priced like an Apple II, it was seen as potential competition from both groups. Also, our leader Steve Jobs had a habit of constantly boasting about the superiority of the Mac team, which tended to alienate everybody else.

Mac programmer Andy Hertzfeld on Folklore.org



The Updated Book of Jobs

It was during that pivotal year of 1982 that a crucial event happened that shaped Steve's relationship with the media. In February, at age 27, he appeared on the cover of Time Magazine (Microsoft chairman Bill Gates was supposedly infuriated Steve got there first — he would only appear on Time's cover two years later). He was depicted as a symbol of America's young entrepreneurs.

Steve was pleased and agreed to give the Time reporter, Mike Moritz, carte blanche for writing a book about the history of Apple in general and Macintosh in particular.

By the end of the year, there were serious talks about naming Steve Jobs Man of the Year 1982. Mike Moritz, who had been appointed Time's San Francisco Bureau Chief, started conducting lengthy interviews in anticipation of the story. But to everyone's surprise, Time decided to go with *"the personal computer as machine of the year 1982."* There was no Man of the Year! Instead, Moritz wrote a piece called [The Updated Book of Jobs](#), in which Jef Raskin said that Steve *"would have made an excellent King of France."* Steve was furious. He called up Jef Raskin and Dan Kottke, his friend from Reed, who (anonymously) said to Moritz that *"something is happening to Steve that's sad and not pretty, something related to money and power and loneliness. He's less sensitive to people's feelings. He runs over them, snowballs them."* It is rumored Steve never talked to Dan again.

Steve would be a lot more suspicious of the media from then on. He would also be even more protective of his privacy — as the Time article brought up the situation with his illegitimate daughter Lisa.

John Sculley

In January 1983, Steve traveled to the East Coast for the launch of Lisa. It was sort of an awkward situation, given that the chairman's heart clearly belonged to Macintosh. And he couldn't prevent himself from saying so — he would always point out that a few months later, a better GUI computer was going to come out, with superior software yet at a fraction of Lisa's price. Moreover, the Lisa software would not run on Macintosh. This attitude only worsened a critical response that was already negative, given the machine's whopping \$10,000 price tag.

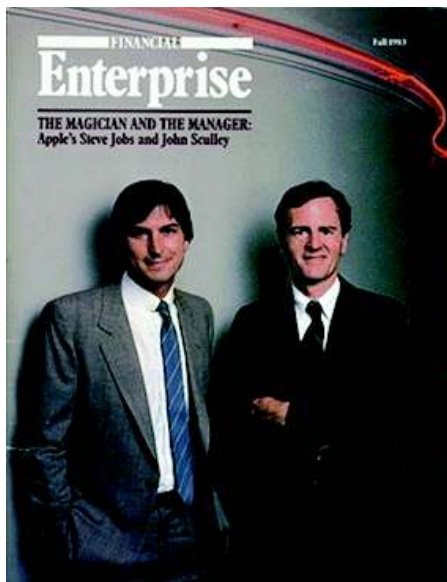
While Steve was in New York City, he met with PepsiCo executive John Sculley. Remember Apple was still looking for a CEO, since the departure of Mike Scott. The board would not let 28-year-old Steve Jobs run the company as he was way too inexperienced. Steve seduced Sculley into moving to California to become Apple's CEO and groom him into a full-blown manager. The words he used are now legend in corporate history:

Do you want to sell sugared water for the rest of your life or do you want to come with me and change the world?

quoted from *Triumph of the Nerds*

In Sculley's first months at Apple, his relationship with Steve Jobs seemed almost like a honeymoon. They would both go at lengths in the media about how they got along so well that they could finish each other's sentences. Steve really thought of Sculley as a friend, taking him in his typical long walks on Stanford hills.

More importantly, Sculley agreed with Steve's vision of making Macintosh the #1 priority at Apple. Throughout 1983, Lisa turned out to be a bomb in the marketplace, like Apple III before it. Apple was still relying only on its six-year-old Apple II computer — whose market share kept shrinking



because of the IBM PC. Macintosh had to succeed, or else the company would be out of business very quickly.

Why 1984 won't be like "1984"

After Lisa came out in January 1983, the whole Lisa group joined Steve and his team to get Macintosh ready for market. The team quickly grew into several dozens of people — the renegade days seemed long gone.

Everything didn't go smoothly: all the teams were late, and the management eventually had to decide on a date for the introduction of the product. They picked Apple's 1984 shareholders meeting, on January 24. There was also tremendous pressure to make software available to the new platform for the launch. Several software developers signed up, including market leader Lotus and Bill Gates' Microsoft, whose main business at the time was the IBM PC's operating system, DOS. But one of the hottest issues was Steve Jobs' antagonizing attitude. He would keep on berating the other divisions: he famously called the Apple II engineers (who were the only ones bringing cash in) *"the dull and boring product division."* After Lisa was launched, he also said in front of the whole development team, including people who were about to get fired: *"I only see B and C players here. All the A players are with me on the Mac team."*

As far as marketing was concerned, Steve went to Chiat/Day with Mike Murray, and they worked together with Lee Clow on a breakthrough Macintosh commercial, 1984. They hired a young director, Ridley Scott, to shoot an ad that depicted Apple's computer as a blond, athletic Californian girl throwing a hammer at IBM-Big Brother's face on a huge screen. The ad concluded that 1984 wouldn't be like George Orwell's 1984. The ad was so audacious it was almost canceled, but in the end the board went for it. It is now widely acknowledged as one of the best TV commercials ever created. It was aired during Super Bowl XVIII, on January 22 1984, and started an enormous media hype around Macintosh's introduction two days later.



When the day finally came, Steve proved once again his talent as master showman. He [introduced Macintosh](#) as a revolution to a cheering crowd at Cupertino's Flint Center auditorium. As he came off stage, he said:

It's the proudest, happiest moment of my life
quoted in *Triumph of the Nerds*

After what Apple had been through for the past three years, every hope turned to Steve's Macintosh to salvage the company. It was a perilous bet...

Disappointments

At first, the Mac did seem to be a huge hit. In the couple of months that followed its introduction, Steve Jobs and the development team posed for

countless photos, gave more than two hundred interviews, and ended up on several magazine covers.



There was also a significant success on US campuses. Before the introduction, a team of Apple salespeople led by Dan'l Lewin had convinced twenty-four Ivy League institutions to sign up for the so-called *Apple University Consortium* program: they would become Apple dealers, buying Macintoshes wholesale and selling them at a discount retail price to students. Throughout 1984, Macintosh became the first cult machine of American college students.

But after this encouraging wave of early adopters, Mac sales started to plummet. There were several concerns about Apple's computer: first, it was painfully slow, as its processing power had difficulty handling the complex Graphical User Interface. It was also a bit pricey, selling for \$2,500, a thousand more than the IBM PC it was supposed to compete with. But the biggest drawback was software: Macintosh being a brand new platform, almost no program could run on it when it was launched, whereas a ton of applications were already available on the IBM PC platform. Everyone agreed that Macintosh was a lot friendlier and easier-to-use, that its technology was far superior to that of the IBM PC; but it was useless. Mike Murray's marketing team was criticized for not advertising the machine appropriately: businesses felt it was a cute machine for yuppies and their kids, not a computer that would improve their productivity.

Steve leaves Apple

Tensions

Steve could not deal with the market failure of his baby. He continued to behave as if he had saved Apple, treating non-Mac employees with deference in Cupertino. People felt he spoiled the Mac team, buying them a BMW motorcycle and a Bosendorfer grand piano with his personal money, while the company was still alive thanks only to Apple II sales (the truth was that Macintosh engineers were paid the same or even less than their counterparts).



There was increasing resentment building up against Steve Jobs at Apple. The honeymoon with CEO John Sculley was over: the two men increasingly criticized one another in their inner circles. Even Woz, who felt insulted by the treatment the Apple II team received, left the company in February 1985. He openly criticized the management in Cupertino: this was a PR disaster for the firm.

In April 1985, the board discussed re-organization plans for the company. Everyone agreed there should be a new manager for the Mac team, namely Apple France executive Jean-Louis Gassée. Jobs even accepted the idea for a while, thinking of running a new R&D department instead. But he was outraged when Gassée asked for a written guarantee of his promotion.

To him, it became a personal war with Sculley. While the CEO was away on a business trip, on May 23 1985, Steve gathered some of his top aides, telling them Sculley wanted him out of his own company. The next day, Sculley heard of the scheme and canceled his trip. He confronted Steve in front of the other Apple executives. After hours of intense discussions, they simply couldn't find a solution to the conflict between the two men. Steve said he would take a vacation until they were done with the re-organization, and left. It was only a few days later, on May 28, that Sculley informed him that the board had decided on a new org chart, which did not include him at any managerial position. Steve's conviction the board would support him had proved wrong: he had lost the final battle.

At 30 I was out. And very publicly out. What had been the focus of my entire adult life was gone, and it was devastating. I really didn't know what to do for a few months. I felt that I had let the previous generation of entrepreneurs down — that I had dropped the baton as it was being passed to me. I met with David Packard and Bob Noyce and tried to apologize for screwing up so badly. I was a very public failure, and I even thought about running away from the Valley.

Stanford Commencement Address, 12 June 2005

Experimentations

During those four months, from May to September 1985, Steve was still chairman of the board — he was not fired from Apple, contrary to popular belief. But he had a lot of times on his hands, and tried hard to find what he was going to do next.

He traveled to Europe, advocating Macintosh to French universities, biking around Tuscany, and thinking of settling in the south of France. He went to the Soviet Union to preach the benefits of personal computing and asked NASA if he could ride the Space Shuttle. He even thought of running for the office of governor of California, seeking advice from his friend Jerry Brown. But none of these endeavors could really absorb his energy and his continuing passion for computing.

He also looked for places to invest in. One of his very good friends from Xerox PARC, computer pioneer Alan Kay, told him about an iconoclastic group of computer graphics developers north of the Bay Area, whose parent company, Lucasfilms' Industrial Light & Magic, was trying to get rid of.

The Genesis of Pixar

The founding fathers of Pixar were researchers Ed Catmull and Alvy Ray Smith, who, as early as the 1970s, shared a dream of making animated movies with computers. Yet they knew it would take at least a decade before their vision could materialize, given the necessary computing power to handle such complex operations. So they just got together and waited for the technology to evolve.

Catmull and Smith slowly put together a core team of computer graphic pioneers that also believed in computer-animated films. Among the first members were computer scientists Ralph Guggenheim and Bill Reeves. John Lasseter, a brilliant animator from Disney, joined them in 1984. The group moved from one benefactor to the next since its creation; in 1985, they belonged to George Lucas' Industrial Light & Magic (ILM).

Yet the Star Wars filmmaker was trying to sell the division. He needed money after his divorce, and, more importantly, he did not share the team's vision. He just wanted to use 3-D animation for special effects in movies.

In addition, at the time, Pixar was working on a graphical workstation, a very powerful computer dedicated only to processing visual data. They had also started developing their own 3-D computer language, RenderMan. The department was clearly evolving outside of Lucasfilm's realm, and that's why they were looking for a new patron.

Steve toured the ILM lab and was mightily impressed. He compared this experience with his revelation at Xerox PARC six years earlier, when he was first shown the graphical user interface. Yet the price tag was too high: \$30 million. He turned Lucas down, but asked to be given a call if the offer got cheaper.

A new venture

As the story goes, Steve Jobs was still looking for new directions in life when he met with a friend of his, Nobel Prize Paul Berg, from Stanford University. Berg told him of his work on DNA, and asked him whether the molecules could be simulated on computers. The answer was no, not yet anyway... this gave Steve the idea of starting a new company. He would build a high-end computer aimed solely at the higher education and research markets. He asked around and found out the general consensus was a need for a so-called 3M machine — a computer that could hold one megabyte of memory, perform one million instructions per second, and display one million pixels on a screen.

Since he was still at Apple, he decided to inform the board of his decision. On September 13 1985, he described his plan. The board seemed enthusiastic at first, even willing to invest in the chairman's new venture. But when Steve announced who would join him in his new company, called Next, they turned bitter: he would go away with Bud Tribble, the first Mac programmer; George Crow, a key Mac hardware engineer; Rich Page, who had supervised almost all of Lisa's development; Dan'l Lewin, who had made the Apple University Consortium possible; and Susan Barnes, a Wharton alumnus with a MBA in finance. These were not "low-level" people, as Steve had presented them! Apple felt threatened, especially since they were themselves working on a 3M machine code-named *Big Mac*.

This was the coup de grâce for Steve. On September 17, he announced his resignation from Apple to an assembly of stunned journalists gathered at his [mansion in Woodside](#).



NeXT Inc.

Next did not start easily. The minute it was created, the six co-founders found themselves sued by their former employer, Apple. The fruit company was accusing them of stealing their technology.

As a result, for its first year or so of existence, the new company could not work on any product in particular, since there was a chance they would lose the trial and give all the technologies they had worked on back to Apple.

In the meantime, Steve Jobs set up to build the perfect company.



The Next co-founders outside Steve's mansion in Woodside.
From left to right: Steve Jobs, George Crow, Rich Page, Susan Barnes,
Bud Tribble and Dan'l Lewin.

The perfect company

He started by doing one of the things he was best at doing: recruiting. He hired only extremely bright and competent people. At one point Next bragged that even their receptionist was a Ph.D.! There was incredible hype around Steve's new venture. It seemed like the whole Valley wanted to work at Next — even though it was considered “a leap of faith” (since nobody knew what they would have to work on eventually). Among its first employees was Avie Tevanian, a software genius who was still a student at Carnegie Mellon University when Steve met him. He was working on a UNIX kernel called Mach; Steve told him that if he joined Next, his invention would run on millions of computers in a few years time.

You basically had to meet everyone in the entire company and they all had to give you the thumbs-up. It really felt like a fraternity. Everyone had to love you. So the feeling you got was that anyone who got through had to be 'the best of the best'

an early NeXT employee quoted in Alan Deutschman's *The Second Coming of Steve Jobs*



Next treated its employees in a pretty unique fashion in Silicon Valley. First, there were only two levels in salary for a long time: senior staff earned \$75,000 a year, and the rest earned \$50,000. It gave the place sort of a communal feel, a community of super-bright people, not a tech start-up driven by greed. Other perks included health club memberships, counseling services, emergency loans, and free fresh juice. Keep in mind the company still had no revenues to speak of during those early years — it was still operating with Steve's pocket money.

Steve also went and looked for a logo and a corporate identity for his new venture. He found both after he asked who was the best logo designer on the planet, and was introduced to Yale art professor Paul Rand. Rand designed a logo for no less than \$100,000, and came up with the name NeXT, with a conspicuous lowercase "e", that was supposed to stand for: *"education, excellence, expertise, exceptional, excitement, e=mc2..."*

Finally, Steve Jobs proved not too parsimonious either when it came to [NeXT's headquarters](#). One of the company's first ten employees was actually Tom Carlisle, a full-time interior designer. They settled in one of the most expensive areas of the Valley, the Stanford Industrial Park, not far from Xerox PARC. Carlisle furnished the place with glass walls and beautiful Ansel Adams prints, and set up a common area with hardwood floors that included a kitchen with granite counter tops and a lounge with U-shape sofas that sat 12.

Money matters

After his departure from Apple, Steve had sold almost all of his stock out of disgust. So by early 1986, he was sitting on more than \$100 million, waiting for opportunities to invest. He got a call from Lucasfilm: they weren't able to find any suitable buyer for the computer graphics team, so they dropped the price by two thirds. Steve agreed to pay the \$10 million, and on January 30, Pixar was incorporated. It would turn out to be a money sink of his for years to come.

But Pixar didn't matter much — it was Steve's *"hobby"* as his heart was at NeXT. He let Catmull and Smith run their small team north of the Bay Area, while he spent his days in Palo Alto. Apple had just dropped its lawsuit against the startup, so they could finally start working on their computer for higher education.

Interestingly enough, Steve's habits as an investor were quite the opposite of his affections for his companies. While he did not care about Pixar nearly as much as he cared about NeXT, he opened the company a line of credit that he would pay with his own money for several years. Pixar was always begging for Steve's money as they barely had any revenues. On the other hand, he refused to fund NeXT solely with his own money. He started to look for outside investors early on.



NeXT's board: Ross Perot, Steve Jobs and Pat Crecine

A critical change occurred when, in November 1986, CBS aired a documentary called *The Entrepreneurs* which featured Jobs during NeXT company retreats. A watcher was millionaire Ross Perot, who was still immensely rich from selling his company Electronic Data Systems to General Motors. He was seduced and phoned Steve: "*if you ever need an investor, call me.*"

It was good news as NeXT was burning money at an incredibly fast rate. So the deal was quickly signed: in February 1987, they announced Perot invested \$20 million in exchange for 16% of NeXT, while Steve kept 63% for himself. The company had no product but a t-shirt back then, yet it was already valued over \$125 million! This is how powerful Steve Jobs' name was in the mid-1980s. Ross Perot joined the board of directors together with Carnegie Mellon administrator Pat Crecine, a good friend of Steve's. Not a very balanced board of directors indeed...

Personal life

There were crucial evolutions in Steve's personal life as well. First, after years of research, he had finally found his biological family. His biological mother Joanne was still alive, and she had actually married his father a couple of years after Steve was born. They had given birth to a daughter, Steve's biological sister, called Mona. Mona Simpson was a young yet accomplished writer who had just published a novel that earned her several literary prizes, *Anywhere But Here*. Steve was thrilled his sister was an artist: there was indeed art in his genes! He filled a bookshelf at NeXT with free copies of Mona's book.



Steve with his daughter Lisa circa 1986

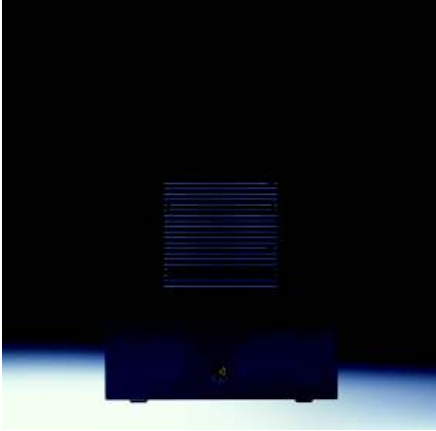
He also started to fully accept his 9-year-old daughter Lisa as family. She increasingly spent time at his home in Woodside, and he even took her to NeXT's offices from time to time. He started to get deeply involved in her education.

Finally, he became more stable in his relationships and was thinking of marrying his girlfriend Tina Redse.

This whole period of Steve's life is well documented in *A Regular Guy*, a novel by Mona Simpson which barely disguises Steve Jobs and Lisa as its main characters.

The NeXT Cube

No detail was too small



There is probably no product in Steve's career that was hurt more by his perfectionism than the NeXT Cube. No detail seemed too trivial to be overlooked; everything NeXT did had to be perfect.

First with software. When Steve started asking around to know what was the state of the art in computer operating system, he was told the most stable, modern software was called UNIX. It was a very complex but very powerful OS used in universities and by large companies in their mainframes. The most advanced UNIX technology was being developed at Carnegie-Mellon, where Steve hired some of his best programmers, such as Avie Tevanian. He was also told about object-oriented programming, a breakthrough from Xerox PARC which made software development very fast and efficient. So Steve knew his priorities for the NeXT operating system: it would be a UNIX object-oriented system — on top of which would be added a graphical user interface, to make it user-friendly. These were the very ambitious foundations of NeXTSTEP, so ambitious that it would take several years before they would give birth to a stable operating system.

Second, of course, was hardware. Steve had been thrilled by the factory that was used to produce Macintosh — he wanted to do even better this time with NeXT. He set up to build the most advanced automated factory in the world, in Fremont, not too far from the Mac factory itself. The NeXT computers would be built untouched by human hands, using robots operated by other NeXT computers. The factory was designed to mass produce NeXT Cubes and bring the costs down with volume... a disastrous choice for the future.



And finally, the design of the machine, of course, had to be a stunner as well. Steve hired frogdesign again, the same firm that had designed Macintosh, and they came up with a perfect black cube built out of magnesium. Although the Cube clearly deserved its place at the SF MOMA, many of its features made it a pain to build: from the perfect right angles to its materials to its color, it was extremely complicated — and expensive — to put together. In addition, Steve had made a point on also designing a *"beautiful"* board for the Cube. All the electronic components, which are usually on several different pieces of plastic, were melded on a single square board that the chairman considered as beautiful as the case itself. However it was a strenuous problem for engineers to solve.

There was also the problem of the computer storage system: Steve hated floppy disks, so when he learned about a new technology developed by Canon called magneto-optical drives, he jumped on the occasion. This was a brand new way to store data, but it had not been brought to market yet

and its price was still astronomical. Steve bet on it and made it standard on the NeXT computer.

The introduction

Because of all its breakthroughs, in both hardware and software, the date of the NeXT computer's introduction was constantly being put off. Originally, it was supposed to be out in spring 1987, since most universities shop for the next academic year during springtime. But the computer was nowhere near ready at that time! It was rescheduled for fall 1987, then spring 1988, and finally to fall 1988 — on October 12 to be precise.

When the day of the introduction came, Steve was as charismatic as ever. It seemed like the whole world had been waiting for his new computer!



I think I speak for everybody at NeXT, saying it's great to be back. [...] I think together we're going to experience one of those times that occur once or twice in a decade of computing, a time when a new architecture is rolled out that is really going to change the future of computing. And we've worked on this for three years. It's turned out in-cre-di-bly great...

quoted in Randal E. Stross' *Steve Jobs and the NeXT Big Thing*

The hype was of tremendous proportions. Steve stayed on the stage of San Francisco's Davies Symphony Hall for three hours, ending his presentation with a duet between a violinist and the NeXT Cube to demonstrate the computer's breakthrough sound abilities.

The audience was so captivated that barely anyone realized that Steve had dropped two bombs in his speech. First, NeXTSTEP, the computer's operating system, still wasn't ready after more than two years of development. It was still in beta version and would not come out before another six months. Second, the Cube's price was astonishingly high! It cost \$6,500, more than twice the \$3,000 universities had agreed to pay for a 3M machine. And that was without the \$2,000 laser printer or the \$3,000 for the hard disk that would prove necessary since the magneto-optical drive was so painfully slow... The Cube was certainly a bargain for everything it came with: the Canon drive alone cost \$6,000 on the market, not to mention NeXT's revolutionary software — but no one had the money to invest in such an advanced machine.

RenderMan & the Pixar Image Computer

In the meantime, Steve's so-called "hobby", Pixar, was also making progress. Remember it had been packaged by Lucas as a graphics computer maker. In 1986, shortly after being incorporated, the company had brought to market a graphics workstation: the Pixar Image Computer, or PIC. But even for the professional markets it was aiming at, its price tag of \$125,000, the additional workstation it required to work, and its total lack of software made it a very exclusive solution. It essentially appealed to major universities and advanced labs in niche industries. Sales were so



The Pixar Image Computer II

disappointing that two years later, in 1988, the company came up with a cheaper system, the PIC II, which sold for \$29,500, while the price for PIC was lowered to \$49,000.

They also released a breakthrough graphical computer language called RenderMan. The idea behind RenderMan was to do for 3D graphics what PostScript had done for fonts and 2D graphics in general: write a universal language that any machine could use to render 3D graphics (more on PostScript below). Yet the concept was too complicated and way ahead of its time. RenderMan was almost only used in Pixar's own rendering software, PhotoRealistic RenderMan.

Getting real

Hopes at NeXT

There were a couple of events that led NeXT executives to falsely believe that they were on the right track, instead of realizing they were heading to the wall.

First was a major deal with IBM that was signed in September 1988, just one month before the Cube's introduction. As we explained before, NeXT's operating system, NeXTSTEP, was a revolution in software. It was the first UNIX ever to sport a graphical user interface, making an arcane piece of software accessible to mere mortals. We also said that UNIX was used on several computer mainframes, the vast majority of which were still IBM-made. That's why Big Blue showed a substantial interest in the NeXT operating system: its intention was to buy a right to license NeXTSTEP on its mainframe systems, in order to add GUIs to its UNIX computers. Moreover, IBM was trying to find a way out of its morass with software developer Microsoft.

The Personal Computer Industry in 1988

When Steve Jobs launched the NeXT Computer in 1988, the industry landscape was radically different from its situation in 1985, the year he left Apple.

The success of Macintosh

First, Macintosh, the sales of which were disastrous in its first two years, was now thriving on the marketplace. It all came down to one word: PostScript.

PostScript was a computer language developed by two researchers from Xerox PARC (again), John Warnock and Charles Geschke. Before it came out, printing text from a computer was a painful thing to accomplish. There was no standard, so every program had to know about every printer, and vice versa. PostScript became the standard: every text editor started speaking PostScript, and every printer as well, so they all started to understand each other seamlessly.

Warnock and Geschke started Adobe Systems in 1982 to build high-end laser printers (another one of their inventions from PARC) that were supposed to be the only machines to use PostScript. It was Steve Jobs who convinced them to make it a standard computer language: he cut a deal with Adobe to use

their software and had Apple purchase 20% of the new company.

His vision proved right: the year after he left, Macintosh sales skyrocketed thanks to the desktop publishing revolution. Desktop publishing is the technical word for being able to designing beautiful texts and illustrations on a computer and then print them exactly as they appear on the screen (with so-called WYSIWYG software for What You See Is What You Get). This technology only worked on Macs for years, making Apple richer than ever...

The birth of a titan

Yet the biggest change on the personal computing scene was not from Apple but from one of its early partners, Redmond-based Microsoft.

In 1981, Microsoft signed a deal with IBM to be the exclusive provider of the operating system that would run on their PC, a piece of software called DOS. The deal also included the right for Microsoft to sell the system to other computer manufacturers. IBM agreed, as at the time, the prevalent belief in the computer business was that no money could be made from software, only hardware.

Big mistake from Big Blue! Shortly after the IBM PC came out, the market was flooded with so-called PC clones: cheaper computers from other companies that would run IBM PC-compatible software. One of the most popular was Compaq, which started in 1982 with the first "portable" PC.

So throughout the 1980s, IBM saw its share of the PC market shrink drastically, while Microsoft was becoming a software behemoth, selling DOS to basically every computer user that was not using Apple products. The firm from Redmond was turning increasingly independent from IBM and impossible to deal with. The solution? Big Blue intended to launch a new standard for its future products, that would have nothing to do with Microsoft, thus putting them out of business.



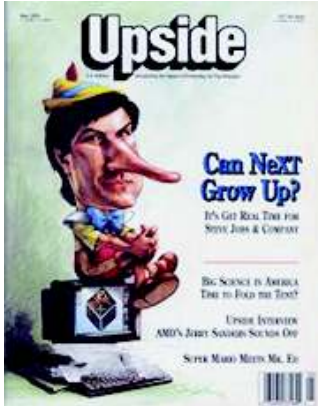
Steve welcomes Canon executives at the NeXT factory in Fremont. Notice the big Cube model at the end of the table

NeXT had the opportunity to become the next Microsoft: if the deal with IBM succeeded, their breakthrough software would run on every IBM-compatible PC in the future.

In addition, in June 1989, NeXT signed a deal with Canon, the Japanese maker of the Cube's magneto-optical drive. In exchange for the exclusive

right to distribute NeXT computers in Asia, they agreed to invest \$100 million for 15.67% of the company — valuing it at a whopping \$600 million!

The NeXT Station



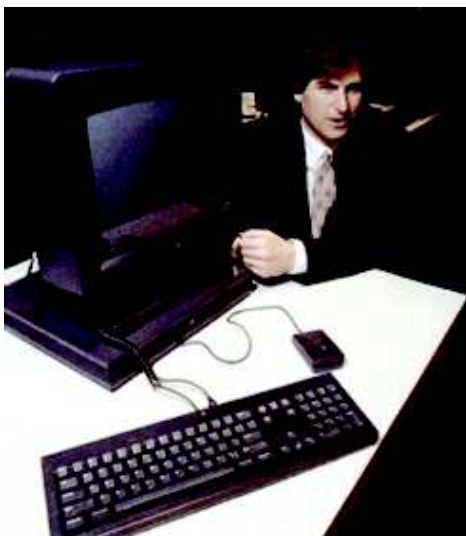
Despite those signs of optimism, the NeXT Cube was a blatant failure on the marketplace. It simply did not sell: universities and students found it way too expensive. Firstly, by 1988, it was common for students to have a Macintosh in their dorm rooms. The days when you had to go to the computer lab to use a workstation like the Cube were long gone. There was also the problem of donations — universities were used to be given, not sold, computers, in the hope that students would use the same computers in their future corporate careers. Finally, the Cube was not as modern as it would have been had it come out the year before: it was monochrome at a time where color started to appear, its magneto-optical drive was a pain to use, and above all, it had very limited software.

The NeXT factory, which had the ability to turn out 10,000 Cubes a month, manufactured an average of 400 a month in 1989! At such rates, the competitive advantage of having an automated factory was turning into a disadvantage — it was a lot more expensive to operate and, lacking the necessary volume, it did not drive the costs down at all.

Steve Jobs tried to adjust by substantially changing NeXT's strategy:

Our smallest competitor is \$1.75 billion these days. [...] We have to get up to a certain level if we want to play in the sandbox.

The Entrepreneur of the Decade, Inc., April 1989



The company stopped selling exclusively to the education market, and tried to make its way into corporate America. NeXTSTEP's object-oriented development environment was a key advantage in that market: it would allow for companies to write custom software in record time. In order to do so, in March 1989, NeXT partnered with Businessland, the nation's largest computer retailer at the time, to distribute Cubes in all of its stores — with a \$9,995 price tag. Of course this hardly worked.

In parallel, work started on a new, cheaper computer. The NeXT Station or "slab" (because of its pizza-box shape) was eventually [introduced](#) in September 1990, along with cheaper Cubes with color and breakthrough video capabilities. The cheapest Station sold for \$5,000, still a high price but half of that of the Cube. On stage also came Lotus software, which announced that the revolutionary next release of their spreadsheet called Lotus Improv would run only on the NeXT platform, and would be bundled with every NeXT computer. The goal was to make it NeXT's killer app (an app that alone justifies buying the machine).

Tough times for Pixar

As for Pixar, it was in a really painful situation by the early 1990s.



Pixar's short *Luxo Jr.*

First of all, the computer animation department, headed by John Lasseter, had to fight regularly for its survival. Steve Jobs almost shut it down several times throughout 1987 and 1988, until the team had the idea of making animation for TV commercials. That way they could survive and keep all the talents they had spent years to gather, while making some money. For all that, work on “artistic” movies did not stop: the team's *Tin Toy* got an Academy Award for Best Animated Short Film in 1988, and the following year, Lasseter earned critical acclaim for his short *Luxo Jr.* at the SIGGRAPH convention. Steve allowed for the animation department to continue such work because the prestige could be used for selling more PICs — although, ironically, Pixar only made one short movie on their computer in their entire history: *Red's Dream* (in 1987).

However, sales of Pixar Image Computers were still extremely disappointing. On April 30 1990, Steve Jobs announced he was shutting down all of the company's hardware operations, while the staff moved away from Lucasfilm's premises to new offices in Point Richmond — not far from a Chevron oil refinery. From then on, they would have to focus only on their boss's new vision: Steve thought that RenderMan was going to become the next PostScript, an open standard adopted by the masses to make 3D renderings at home, just like PostScript had made desktop publishing possible. He was denying the reality of how hard it was to master three-dimensional animation.

If costs were indeed cut a little by this move, it didn't make Pixar more profitable. The startup was still relying on Steve Jobs' line of credit, and in 1990 alone, its net operating loss was over \$8 million.

In March 1991, Steve went further in his drastic moves to make Pixar survive. He declared he would continue to keep funding it only if he were given back all of the employees' stock shares. The scheme involved shutting the company down on paper, and creating a “new Pixar” where he was the sole owner. He also fired almost half the staff, keeping only the software programmers as well as Lasseter's animation department — which was, by then, the only part of the company to bring cash in, thanks to its works in TV advertisement.

Pixar failed nine times over by normal standards, but Steve didn't want to fail so he kept writing the checks. He would have sold us to anybody in a moment, and he tried really hard, but he wanted to cover his loss of \$50 million.

Pixar co-founder Alvy Ray Smith in *The Second Coming of Steve Jobs*

Many people at NeXT shared that same view...

Wilderness years

Marriage



The years of 1991 to 1994 were the worst in Steve's career. Paradoxically, they were some of the happiest years in his private life. In 1990, at age 35, after his girlfriend Tina Redse had turned down his proposal, he started dating a young Stanford MBA student called Laurene Powell. Laurene was a leggy blonde in the mold of Steve's taste in women, but she was also very smart and independent — in addition to being a militant vegan. According to Steve, it was love at first sight: he canceled a business meeting to have lunch with her, and the following year, on March 18 1991, they got married in Yosemite. Steve only brought along a couple of guests in the lodge's chapel, and the no-frills ceremony was conducted by his long-time Zen guru Kobun Chino. A few months later, Laurene gave birth to Steve's second child, a baby boy named Reed Paul, after Steve's alma mater (Reed College) and his father (Paul Jobs).

Troubles at NeXT

Throughout 1990 and 1991, it became obvious to NeXT's management that something was wrong with their computers. They believed it was a strategic error; that they should position themselves as makers of an emerging kind of computers, personal workstations, i.e. computers as powerful as workstations yet as easy to use as personal computers. Their competitors were not Apple or other PC brands anymore, but Sun, the dominant player in the workstation business.

The re-positioning came too late, and it did nothing to improve the disastrous state of the company's financials. They were still spending money like crazy, as exemplified by their new offices facing a marina in Redwood City and its free-standing staircase designed by I.M. Pei's architectural firm. But they were hardly selling: their revenues for 1990 were as low as \$28 million (in comparison, Sun made \$2.5 billion that same year). In addition, NeXT's deal with IBM was canceled, as it proved difficult for two such radically different companies to cooperate. Steve was still suspicious of Big Blue:

I'm not stupid enough to give you everything I have, when you have 27,000 salespeople.

quoted in Randall E. Stross' *Steve Jobs and the NeXT Big Thing*

He was reflecting a common feeling in the company that giving away NeXT's software to IBM was like committing suicide, as it was the company's most valuable asset. Moreover, IBM asked for Steve Jobs to give up hardware if he were to work with IBM, which was out of the question for him at that time. This decision led to the departure of Bud Tribble, the brilliant developer who was heading software and had co-founded NeXT

with Steve in 1985. All the other co-founders but George Crow eventually left in those pivotal years of the early 1990s.

The company's other main partnership, the distribution deal with Businessland, also collapsed as the chain went bankrupt in 1991. NeXT, which had just expanded to the European market, had to turn to independent dealers worldwide, an even costlier solution. Profitability seemed like an impossible goal, and investors started to get angry: Ross Perot left by the end of 1991, after sales for the third quarter had proven abysmal. The company now relied solely on Steve and Canon, who kept pouring money in so that they wouldn't lose all of their initial \$100 million investment (and lose face at the same time). As a counterpart, the Japanese demanded that Steve hire an outside executive to help him run the company. The choice fell upon an experienced manager, Peter Van Cuylenburg, who was named COO in early 1992.

A computer-animated feature film

While Steve was fighting to make NeXT a viable business, a crucial event happened at his other company, *"his hobby"*, Pixar. Remember the animation department had been struggling for survival for years, making TV commercials to make a little money. But it was also awarded several prizes for its short movies, mostly at the renowned SIGGRAPH animation conventions, but also an Academy Award for *Tin Toy* in 1989. John Lasseter was increasingly recognized as one of the industry's most talented animator.

Starting in 1989, Disney's new management (CEO Michael Eisner, but mostly his top aide Jeffrey Katzenberg) tried to hire Lasseter back to the Magic Kingdom. Yet despite Pixar's precarious situation, he continually declined the offer: he realized that in no other place on earth he would find so many talented people who shared his vision of the future of computer animation.

So Disney agreed to sign a contract with Pixar for a full feature film, made entirely with computers. This had been Pixar's dream for years, back in the late 1970s with Ed Catmull and Alvy Ray Smith (who had since left the company because he could not stand working with Steve Jobs). The story line John Lasseter proposed was some sort of buddy movie involving toys. Jeffrey Katzenberg agreed and in May 1991, the contract was signed. Steve negotiated for Pixar to make three movies and keep 12.5% of the revenues from ticket sales. It was a very cheap price for a film, but Steve and the rest of Pixar didn't know better: it was a huge amount of money for their struggling studio! Steve Jobs' investment finally seemed it was going to pay off.



Disney executive Jeffrey Katzenberg

Nadir

Everything seemed to collapse professionally for Steve in 1993, the year he turned 38.

It started with NeXT. In January 1992, he had already made the huge compromise of accepting to license the company's advanced operating system, NeXTSTEP. It would no longer be restricted to NeXT's black boxes, but would also run on Intel's 486 IBM-compatible family of processors. To many experts he should have done this from the beginning, but to Steve, this was the first sign of his failure, as he always felt personally attached to hardware: he had always been a hardware freak, fanatical about his machines' design, spending hours in NeXT's factory watching robots put together his beautiful computers.

But it turned out even worse the following year. COO Van Cuylenburg, who was hired to please Canon, betrayed Steve, in a cruel reminiscence of what had happened at Apple some seven years earlier. He called up NeXT's competitor Sun, and asked its CEO Scott McNealy to buy NeXT and install him as manager of the new entity. Fortunately, McNealy had some sense of honor and told Steve about the outrage. Van Cuylenburg left, but Steve was devastated, especially since all the company's co-founders but George Crow had abandoned him.



In this rare photograph, you can see how Steve Jobs looked at the lowest point of his career. It was taken for Andy Hertzfeld's birthday in April 1993.

From left to right: Mac programmer Andy Hertzfeld, Lisa and Mac programmer Bill Atkinson, Mac programmer and NeXT co-founder Bud Tribble, and Steve.

A couple of months later, the coup de grâce came as NeXT had to face reality and give up its hardware operations altogether. The decision was taken on February 11, a tragic day when 300 of NeXT's 530 employees lost their job. The automated factory was transferred to investor Canon, which sold all its furniture in a memorable auction in September of that year. The dream of a multi-billion-dollar business had given birth to a small software company, NeXT Software Inc., specialized in application development and server technology for the UNIX and Windows platforms.

As if destiny was working against him, Steve also had to face trouble with Pixar in that same awful year of 1993. While the work on the animated feature with Disney seemed to stall for a while, Disney's Katzenberg abruptly put an end to it in November 1993. Together with the majority of Disney's creative staff, he declared that the characters were unappealing jerks and the dialogues inappropriately cynical for a children's movie (while he was the one who pushed for such characteristics early in development). Pixar was back to making TV commercials just so it could survive — but it was obvious it would disappear if the work did not start again.

Steve had reached the bottom of his career. To use his words, he was in *"ankle deep shit."* He didn't even go to work regularly anymore and spent most of his days at home, playing with his two-year-old son.

Saved by toys

Toy Story



Fortunately enough, “*it’s over*” didn’t have the same meaning in Hollywood as it did in Silicon Valley. John Lasseter and other Pixar employees worked very hard at the script, and in February 1994, they turned out a new, improved version that won Jeffrey Katzenberg’s approval: production could resume. Steve was not overwhelmed, as he kept trying to sell Pixar to outside investors until late fall 1994. At the time he came very close to selling the animation studios to... Apple’s arch-rival Microsoft.

But he progressively started to sense Pixar was going to be a lot more important to his career than he ever expected. According to many, the revelation came in January 1995, when he was invited to a Disney event in New York. In the middle of Central Park, the movie studio had set up a gigantic tent with a movie screen showing previews of the two upcoming Disney films, *Pocahontas*, to be released in the summer, and *Toy Story*, for Thanksgiving 1995.

That was the moment Steve realized the Disney deal would materialize into something much bigger than he had ever imagined, and that Pixar was the way out of his morass with NeXT.

Pixar’s Ralph Guggenheim quoted in Alan Deutschman’s *The Second Coming of Steve Jobs*

Steve started to get increasingly involved in Pixar’s affairs, stripping Ed Catmull of his title of President and naming himself President & CEO of the company in February 1995. He also hired an outside CFO, Lawrence Levy, to give Pixar a respectable image to Wall Street in anticipation of a possible IPO.

When *Toy Story* finally came out on November 22, it exceeded all the hopes that Pixar and Disney had put into it. It made \$28 million in the Thanksgiving 3-day weekend alone, and eventually reached \$160 million in US box-office receipts — a great number for a \$27 million production.

Billionaire

But it wasn’t just about the movie.

When Steve started envisioning the possible success of *Toy Story*, he talked about taking Pixar public. Wall Street analysts and experts laughed at his face, since Pixar still hadn’t made a single profit during its nine-year existence. But, in August 1995, a small startup that had existed for only a year and was also unprofitable had made a huge hit by going public: it was Netscape, the software developer of the eponymous Web browser. Suddenly Steve’s idea was not that ridiculous anymore.

However, there was a legal concern because of profit-sharing agreements with some of the company's most senior people: John Lasseter, Ed Catmull, and two other early employees, Ralph Guggenheim and Bill Reeves. Their contracts stipulated they were entitled to some of their movie's revenues, a situation that was contradictory to being public. Steve Jobs arranged the deal by giving away large blocks of stock to the four of them, in addition to the newly-brought-in CFO Lawrence Levy. But he managed to keep 80% of the company for himself, translating into 30 million shares.

There were tensions in Point Richmond after this settlement was revealed. After the IPO, Steve Jobs would become fabulously rich, five senior people very rich, and the others would be left out. Many of them threatened to leave the company, shocked especially by Levy's treatment, since he had just joined the staff and had made almost no contribution to Pixar...

Yet, on November 29, exactly one week after *Toy Story* had come out, Steve's vision proved right. The IPO benefited tremendously from the movie's media coverage, and on opening day, the stock's price jumped from \$22 to \$49. It became the biggest IPO of the year, beating even Netscape's numbers. Steve Jobs had made it: he was now a billionaire, worth almost \$1.5 billion. It was ten times the money he had ever made at Apple in the early 1980s. He was finally vindicated, and enjoyed being back on magazine's covers.

As for Pixar the company, it made \$123 million in the IPO, going from \$47 million in the red to \$76 million in the black. Steve felt strong enough to go back to Disney and re-negotiate a deal that he considered a master-and-slave relationship.

Back to Burbank

This time, Steve decided, Pixar would not get ripped off by Disney. He came with very high demands for the new agreement: a 50/50 partnership, with split production costs and split revenues; total creative control for Pixar over its movies; and equal billing, i.e. the obligation for Disney to show Pixar's logo on the screen and on any marketing artifacts as big or for the same amount of time as its own. That's why you're used to see Pixar's *Luxo Jr.* animation at the beginning of every movie from the studio. Here again



Steve Jobs and Disney's CEO Michael Eisner

we can sense Steve's flair for marketing: he had a vision for Pixar to become as powerful a brand in animation as Apple was in computing. He wanted it to become no less than the next Disney.

The amazing thing is that Jobs achieved to impose these new terms — and what's more, to Michael Eisner, one of Hollywood's toughest negotiators! Disney never treated its contractors the way it agreed to treat Pixar. All of Hollywood was stunned.

Steve had used a killer argument: he threatened to go to other movie distributors as soon as the three-picture deal would be over. Eisner understood Pixar was going to turn into a golden goose and was smart enough not to let it go.

The return to Apple

Apple in 1996

To understand how Steve Jobs came back to the company he founded, it is necessary to have a look at Apple's situation in the mid-1990s.

As we said before, Apple made healthy profits from 1986 to 1995, mainly thanks to its monopoly on both the GUI and the desktop publishing revolution. Everyone who wanted a user-friendly computer bought a Macintosh for approximately \$2,000, half of which were pure profits to Cupertino.

But, starting in 1992, Apple felt threatened by an emerging super-power in the computer business: Microsoft. So far Microsoft was mostly known for providing MS-DOS to the IBM PC and its clones, which accounted for something like 80% of the PC market — the remaining 20% being Apple. But the Redmond-based company was also an application developer, and it had actually worked on the Macintosh with Steve Jobs in the early 1980s to provide Mac software such as Multiplan.

When Bill Gates saw the GUI of the Macintosh in 1982, he also understood that this was the way of the future, a future which threatened his DOS franchise. So he started working on a Microsoft GUI that could be added on top of MS-DOS: Windows.

For years, Windows was so terrible that nobody in the industry took it seriously. But Apple started feeling threatened when it became better and more Mac-like, especially after the release of Windows 3.0 in 1990. As early as 1988, Apple sued Microsoft for stealing *"the look and feel"* of its Mac operating system. The case ended at the Supreme Court in 1994, and Apple lost (one of the main arguments was it had itself stolen the GUI from Xerox some fifteen years earlier).

The following year, in 1995, Microsoft launched Windows 95, which was the most successful GUI release in the history of personal computing. Almost every PC user upgraded and started using GUI en masse, while Apple lost its monopoly. Macintosh sales started going down dramatically, not only because of the Wintel domination, but also because of the bad move to license the Mac OS to Mac clone makers — manufacturers of cheaper computers that could use Apple's system. The company was losing market share, and getting rid of its successive CEOs didn't seem to help. After John Sculley left in 1993, he was replaced by Michael Spindler for two years, and then by Gil Amelio starting in February 1996. The company was going downhill, failing to deliver new products on time and lagging behind in software development.

Taking over?

The first talks of Steve Jobs going back to Apple started in 1995, even before Gil Amelio was named CEO. In December of that year, Steve's friend

Larry Ellison, the founder and CEO of Oracle and one of the world's richest men, talked about making a hostile takeover bid for Apple in the media and on his website. All the arrangements were made for Oracle and other investors to purchase the company for about \$3 billion and install Steve as its new boss. Steve later explained that he was the one who decided against it at the last minute:

I decided I'm not a hostile-takeover kind of guy. If they had [asked] me to come back, it might have been different.

Steve Jobs on the takeover bid, quoted in a *Time* article from December 1996

A new foundation for the Mac OS

It was one year later that Steve's return to Apple was set into motion. In November 1996, the company was looking for a new operating system for its future Macs. The Mac OS was bloated with old technologies, slow, and unadapted to modern computers. Apple had been working for some time on an internal project called Copland, yet it was constantly being delayed and it soon became obvious it would not fit the bill. So CEO Gil Amelio started shopping around for a modern OS to buy, and after a while, a consensus started to emerge on Jean-Louis Gassée's BeOS. Gassée was the former Apple France executive who was supposed to replace Steve Jobs as the head of the Macintosh division in 1985. He had since left Apple and started his own company, Be Inc., whose software had everything Apple needed, including the good taste of running natively on Apple's products.



Jean-Louis Gassée during his Be years

However some NeXT employees called up Apple and told them about their own system, the very advanced NeXTSTEP, that had always been regarded as one of the best software platforms on the planet. Steve Jobs learned about it later and he was stunned. But in December 1996, he showed up at Apple for the first time in eleven years and not only convinced the board of using his technology, but also to buy his company. Apple agreed to pay more than \$400 million for NeXT, whereas Be was only asking for \$200 million.

Joining Apple fulfills the spiritual reasons for starting NeXT.

Steve Jobs said, envisioning the finally wide-spread use of NeXTSTEP, a dream he had struggled ten years to realize. As part of the deal, Steve got 1.5 million Apple shares that he could not sell for a year, and was appointed "informal adviser" to CEO Gil Amelio...

Palace coup

Steve also agreed to take the stage at Macworld Expo in January 1997. The show painfully showed how disastrous the company's management had become under Amelio. The CEO kept rambling, unable to make sense as he got lost in his notes. And then he dropped the bomb: Apple had had one its most terrible quarters ever in Q4 1996, with sales that fell 30% below their 1995 level.

The situation did not improve as in Q1 1997, the company lost \$700 million, making the total losses under Amelio amount to over \$1 billion. Steve sold his stock the minute he was allowed to do so, sending it further into the bottom:

Yes, I sold the shares. I pretty much had given up hope that the Apple board was going to do anything. I didn't think the stock was going up.

Time interview

It was too much. In July, the board of directors, led by Steve's ally Ed Woolard Jr., ousted Amelio after 500 days on the job, and asked Steve Jobs to become the company's new chairman and CEO. He declined, accepting only to become a mere member of the board and an interim CEO, to supposedly help the company get back on track before leaving the position to somebody else. He was concerned about being CEO of two public companies at the same time — Pixar and Apple. After he seized power, he reformed the board to install his friends: of course Ed Woolard, chairman of DuPont, stayed, as well as Gareth Chang, president of Hughes International. The new members were all supporters of Steve, starting with his friend Larry Ellison, CEO of Oracle; Jerry York, former CFO of Chrysler and IBM, also joined, together with Bill Campbell, the CEO of software developer Intuit.



Steve and Gil Amelio at Macworld 1997

The interim CEO

Macworld Boston 1997

One of Steve's first decisions was to make a deal with market leader Microsoft. This was a hot issue as to many Apple customers, Microsoft was something of a personal enemy, the embodiment of evil in the computer industry. Yet Steve Jobs came to his old acquaintance Bill Gates and proposed him to solve the several disputes between their respective companies. The deal included the end of all patent lawsuits, a promise to keep releasing Mac versions of Microsoft Office for five years in exchange of making Internet Explorer the default Web browser on the Mac, and a \$150 million investment in Apple from Microsoft, in the form of non-voting shares.

When Steve Jobs unveiled the deal in August at [Macworld Boston 1997](#), the Apple fans in the room welcomed the announcements with screams of apprehension. They were especially startled when Bill Gates' face appeared on the huge screen of the room, curiously reminiscent of the 1984 ad against IBM. After all, Steve himself had often called Microsoft "the IBM of the 1990s."



Left: Bill Gates at Macworld Boston 1997.

Right: *Big Brother* in the 1984 commercial



It was during that same keynote that Steve Jobs hinted at the new marketing strategy for Apple. He would leverage the incredible power of the Apple brand, focusing only on the company's culture of rebellion and artistic creativity. This was the germ of the *Think Different* campaign. Steve had come back to Lee Clow at TBWA Chiat/Day, the ad agency that was responsible for the original Macintosh's advertising (especially the 1984 commercial), to help him restore the company's image in the public. The result was as Jobsian as it gets: huge black and white photographs, similar to the ones he had at home, portraying great iconic people who were celebrated for having changed the world.

The ads are for people who don't care what the computer does, but care about what they can do with the computer. The premise is that people who

use Apple computers are different, and that we make computers for those creative people who believe that one person can change the world.

Allen Olivo, Apple's senior director for worldwide marketing communications, in the *New York Times*

It is not surprising that the agency suggested Steve Jobs as one of the persons to be displayed in the ads, although he turned it down.

New strategy

Steve started working like crazy in that second half of 1997 to put Apple back on track.

He surveyed every single product team in the company, calling them in one by one in Apple's conference room. Everybody had to convince him that their product was essential to the company's strategy. There was no sentimentality: if the product was not making a profit, it usually had to go, however strategic it might seem to the engineers working on it. He soaked up a tremendous amount of information about all aspects of the business before taking action.

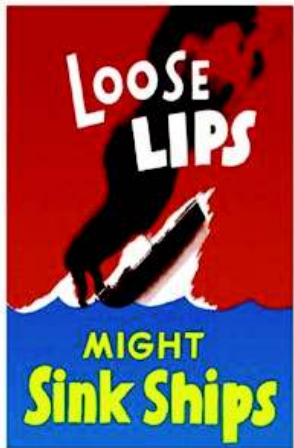
To be fair to his predecessor, Gil Amelio had already started the turnaround work by cutting the number of Apple projects from 350 to around 50. Steve finished the job by cutting it down to ten:

What I found when I got here was a zillion and one products. [...] It was amazing. And I started to ask people, why would I recommend a 3400 over a 4400? Or when should somebody jump up to a 6500, but not a 7300? And after three weeks, I couldn't figure this out! And I figured if I can't figure it out working inside Apple with all these experts telling me into it, how are our customers going to figure this out?

Steve Jobs at WWDC 1998

Steve had brought a number of NeXT executives that had remained faithful to him at Apple. Most notably, he installed Avie Tevanian as head of software, Jon Rubinstein as head of hardware, Mitch Mandich for sales, and Phil Schiller at worldwide marketing. He personally handled operations until he hired Tim Cook away from Compaq in March 1998, naming him COO. He also left his mark on the daily life at Apple campus, enforcing new rules such as the interdiction to smoke or to bring pets to work. One of the most appreciated change was the new cafeteria, which Steve had run by Palo Alto's famous Italian caterer, *Il Fornaio*. It is still considered one of the finest cafeterias in the Valley.

Some of Steve's first decisions included the killing of the Mac clone business, which deeply hurt Apple's hardware sales while not increasing the Mac OS market share; and the launch of Apple's online store, one of the first of its kind. It would soon become a model to several other tech companies. Steve also brought with him the culture of secrecy he had developed at NeXT. Apple was a rumor mill at the time; every product was rumored



months in advance in the specialized press... well this would end under Steve Jobs. He hung a World War II poster in his office that stated: *Loose Lips Might Sink Ships*. The new policy was clear: leaking information about future products to journalists or analysts would get you fired real quick.

As far as the new product strategy was concerned, it was pretty straightforward. On the software side, all the developers started working on porting NeXTSTEP to the Mac platform, headed by NeXT's Avie Tevanian. This would end some four years later, with the introduction of Mac OS X. Regarding hardware, Steve decided to start from scratch and base the whole strategy on a simple matrix. Apple would drop its 20+ product lines and make just four great products: a consumer desktop, a consumer notebook, a pro desktop and a pro notebook.

Insanely great products

The first product lines to be renovated by Steve Jobs were the pro products, Power Mac and PowerBook, which he unveiled in November 1997, only eleven months after he came back. They were the first Macs to run the new Power PC G3 family of processors, from Motorola. They were relatively fast machines designed for creative professionals, which outperformed their Pentium-based competitors in many respects.

The new pro Macs sold quite well, proving to Steve that he was right about Apple's customer base. He knew that a lot of Mac users had refrained from buying new computers throughout 1995 and 1996, not because they wanted to switch to Windows, but because they were afraid that Apple would disappear. It was a widespread feeling within the Apple community while Cupertino kept releasing bad products and accumulating losses. When Steve Jobs came back and insufflated the company with confidence in the future, sales started rising again. So much so that at Macworld 1998, on January 8, he announced on stage that Apple was back to profitability. For the first time since 1996, it had made a \$45 million profit in the last quarter of 1997.

But Apple's biggest hit was yet to come. When Steve came back at Apple, a team was working on a so-called NC machine, for "*network computer*." It was commonly thought at the time that personal computers were living their last days before their complete replacement by so-called "*network appliances*", stripped-down terminals that would get all their content from the Internet. Steve kept the project internally but made it evolve into a new consumer desktop computer, the iMac (the *i* stood for Internet). For the looks of the box, he turned to one of Apple's in-house designer, a soft-spoken Englishman named Jonathan Ive. Ive had joined the company before Steve came back, but it was the interim CEO who made him head of the industrial design team.

Steve unveiled the iMac on May 6 1998, at the Flint Center auditorium in Cupertino, in the same room where he had unveiled Macintosh some fourteen years earlier. The choice was highly symbolic, just like the first

words that showed up on the computer's screen: *"hello (again)"*, a reference to Macintosh's original *"hello"*. Steve Jobs had put Apple back at the forefront of the consumer desktop scene, a market the company had invented.



Steve Jobs posing with the two computers with which he saved Apple: the Macintosh in 1984 and the iMac in 1998

Apple made bold choices in developing iMac. It was the first mainstream computer to offer USB connectivity, a technology developed by Intel that was almost inexistent in the PC space. Apple dropped all of its older I/O for USB, and today, the iMac is recognized as the one machine that helped popularize this now-ubiquitous standard. The iMac was also the first personal computer not to include a floppy disk drive. Steve hated floppies, as we have seen in the chapter about NeXT. He only put a CD-ROM drive in iMac, deciding that users who needed floppies would purchase separate Zip drives. The decision proved right, as floppies disappeared some two years later.

But perhaps the most striking feature of iMac was its radically different design, developed by Jonathan Ive and his team. It was a translucent, blue/green, round machine in a boring world of beige boxes. iMac influenced a whole generation of designers, and its mark can be felt in a myriad of different products from the time, which ubiquitously sported translucent, colored plastic.

The extraordinary enthusiasm unleashed by iMac not only boosted sales, but it reinforced confidence in the company's future. A significant sign was the increasing number of software developers who announced they would come back to the Mac platform after iMac was introduced. This was crucial, as many critics pointed out that the amount of software available on the Mac OS was ridicule compared to its Windows counterpart.



Head of Design Jony Ive and head of Hardware Jon Rubenstein with the lifesavers iMacs





The iMac proved one of Apple's biggest hits, selling two million units in its first two years. But of course Steve Jobs didn't stop there.

Only seven months later, in January 1999, he made two product announcements at Macworld San Francisco. First was a brand new Power Mac G3 tower that was not only faster, but also featured a new, appealing design inspired by the original iMac. And second was that the iMac would now come in several colors, hence its internal code name "*lifesavers*"... this was another breakthrough in computer design at the time.

However it would take another six months for Apple to fill its product matrix, until in July 1999, Steve unveiled the iBook at Macworld New York. The company's consumer notebook was introduced with the tag-line: "*iMac to go*," as its design clearly evoked that of its desktop counterpart. It was a sensation again to many industry observers.

During that same show, Apple also unveiled its first Wi-Fi product, the AirPort base station. Wireless connectivity was typical of an Apple innovation. The company being and wishing to remain small, it usually developed new technologies two or three at a time, not more, so that it could keep its focus and put A teams on every project. By doing so, Apple could pioneer several technologies with a brilliance unmatched in hi-tech: AirPort clearly set the standard for the future of WiFi.

After two years as interim CEO, Steve Jobs completely turned Apple around. He restored the company's public image, implemented a successful and focused new strategy, attracted software developers, and launched highly innovative and awe-inspiring products on the marketplace. The confused product lines had turned into a simple yet powerful product matrix, filled with breakthrough computers:

	Consumer	Pro
Desktop	 iMac	 Power Mac
Notebook	 iBook	 PowerBook

A true visionary

Apple's CEO, at last

Steve Jobs' keynote address at Macworld on January 5 2000 was a milestone for two reasons.



First, after a little over three years of managing Apple, he declared he had accepted his de facto situation and become the company's full-time CEO. Remember that he was only interim CEO up to this point, not wanting to upset either Pixar's or Apple's shareholders by being simultaneously CEO of two public companies. Time had proven this wasn't a problem: Pixar was well managed by Ed Catmull and John Lasseter, and had released two successful movies since *Toy Story*, *A Bug's Life* and *Toy Story 2*. His main role at Pixar was negotiating with Disney, which left him plenty of time to run Apple. He had turned the Cupertino firm into a leader in computer innovation again, steadily refreshing its product line and pioneering new technologies.

When the crowd heard the news, everybody stood up and cheered at their beloved leader (see it in the [Movie Theater](#)). It was obvious the Apple community was grateful to Steve for saving their favorite company.

Mac OS X

But the biggest news was probably the unveiling of Apple's new operating system, Mac OS X.

Mac OS X was the result of three years of hard work by all of Apple's software engineers to port NeXTSTEP to the Mac platform. The new system felt like an evolved version of the Mac OS, but people familiar with NeXTSTEP felt home too. You can verify this on [the video NeXTSTEP vs. OS X in the Movie Theater](#).

Let's have a look at the system's architecture to see what we mean.

The system's UNIX kernel was called Darwin, and it was based on Mach, the modern kernel technology developed by Avie Tevanian at Carnegie Mellon and the foundation of NeXTSTEP. Darwin was why Mac OS X had protected memory and pre-emptive multi-tasking, which allowed for multiple applications to run at the same time without ever bringing the system down. It also provided very advanced networking, unlike the old Mac OS.

2D graphics were based on PostScript, just like NeXTSTEP, which allowed for nice font anti-aliasing and on-the-fly PDF rendering. 3D graphics however, unlike NeXTSTEP, were based on the most widespread standard, OpenGL, not on Pixar's RenderMan. And the media core was Apple's QuickTime, an old Mac technology ported to the new system.



Object-oriented application development, which was the *raison d'être* of NeXTSTEP and its true competitive advantage, was of course possible in OS X, but it required entirely rewriting an application. So Apple provided an environment to which old Mac apps were easy to port, called Carbon — and OS X even supported those apps natively in a third environment, called Classic. Although Classic could not support any of OS X's benefits, it was necessary to ease the radical transition from the old Mac OS to the brand new OS X.

All these advanced technologies (most of which had been available on NeXTSTEP for over a decade) were essential, but what users noticed the most was Mac OS X's brand new user interface, called Aqua. In fact, it is Aqua that Steve Jobs introduced at Macworld 2000, since OS X's technologies had been known to developers for over two years, and the actual system wouldn't ship for another year.

Aqua was a revolutionary new user interface that visually took the Mac OS and even NeXTSTEP to a whole new level. It used translucent colors instead of solid grays, circles instead of angles, and shadows and transparency aplenty. In fact the reason it was called Aqua is that *"you wanted to lick it"*.

Mac OS X shipped on March 24, 2001, and became the core of Apple's resurgence and current success. What an incredible twist of fate: to make a long history short, Apple was eventually saved by NeXT, a company that was created to defeat it by an angry Steve Jobs.

The Digital Hub strategy

Apple's so-called Digital Hub strategy also emerged in 2000, although it was only disclosed a year later at Macworld San Francisco 2001 (see it in the [Movie Theater](#)).



The Digital Hub strategy was a take on the future of personal computing that went against a common belief that had developed toward the end of the 1990s. Many analysts were so enthusiastic about the success of the Internet that they were convinced the personal computer was soon to disappear. It would evolve into a mere terminal whose only purpose would be to access all kinds of content on the Web. The consensus was that the current state of the PC was a dull, boring box, and that any innovation had stopped in the industry.

Steve Jobs and Apple thought differently. They were among the very few that professed quite the opposite: the PC had a very exciting future. As they put it, it had evolved throughout the years from the age of productivity, in the 1980s, where people used it for spreadsheets and databases; to the age of networking, in the 1990s, where it connected to the Internet; and it was now, in the early 2000s, entering its third age: that of the digital lifestyle. Consumers were increasingly starting to use all kinds of digital devices: digital cameras, camcorders, music players, PDAs... But these devices didn't

make sense without a computer. The personal computer was going to become the center or digital hub of this new digital lifestyle, making all its pieces — music, photos, movies, contacts, data — come together.

It's worth stopping and looking back at this for a minute. See, it's such decisions that have made Steve Jobs worthy of his reputation of hi-tech visionary. He certainly isn't always right: he never believed in Pixar's success in making animated movies, for example, until the very last months before *Toy Story* was released. He thought NeXT would become a new standard in personal computing, and Pixar's RenderMan would allow mere mortals to draw 3D objects just as easily as they laid out and printed newsletters. He also released computers that flopped badly, from the NeXT Cube to the G4 Cube, released in July 2000 and discontinued just one year later. But he really did see the future at several points in his career: first, of course, with the personal computer, which led him to start Apple. Then with graphical user interfaces, and later with desktop publishing, on the original Macintosh. We can now say without doubt that the digital hub strategy was another one of those great visions, one that has turned Apple from a niche computer company to the computer/music/consumer electronics powerhouse it is today.

Looking back at this success, Steve summed it all up in this particularly telling phrase:

The great thing is that Apple's DNA hasn't changed. The place where Apple has been standing for the last two decades is exactly where computer technology and the consumer electronics markets are converging. So it's not like we're having to cross the river to go somewhere else; the other side of the river is coming to us.

Steve Jobs in How Big Can Apple Get?, Fortune, February 2005

Indeed, if you look back at what had always inspired Steve Jobs, it was simplicity, ease of use, using computers to do creative work, and making your life easier. He always looked up to Sony, to which he was thankful for creating the consumer electronics business... in a way, he always dreamed of what Apple is doing today, and prepared the company for it, even unconsciously.

It started with iMovie, a digital movie editing application that Apple introduced in 1999. As opposed to the digital hub strategy, one can think of iMovie as one of Steve's erroneous visions. He thought that "*desktop movies*"; i.e. the ability to shoot movies with digital camcorders and edit them on your computer, was going to be the next big thing in personal computing, yet another "next desktop publishing revolution." It was one of his main points when he introduced the iMac DVs in late 1999.

But quickly enough, he realized he was wrong. Users didn't embrace desktop movies as fast as he hoped, and certainly PC users didn't switch to the Mac to use iMovie. However, they did go online to download music



iMovie
1999



iDVD
2001



iTunes
2001



iPhoto
2002

over Napster, as digital piracy really started to emerge by the turn of the century.

It was the starting point of the digital hub strategy. Apple's software developers began work on a couple of new digital lifestyle applications, namely iDVD, to burn your movies on DVDs, and especially iTunes, the digital music jukebox. iTunes was actually written in less than five months, which exemplifies the panic of Steve when he realized Apple was late catching up with the digital music revolution. The company actually didn't start from scratch, as they brought in an outside developer who was working on a similar piece of software to save some time.

However, Cupertino didn't always plan to develop all its digital lifestyle applications in-house. After all, they had enough work on their hands with bringing their new operating system to market. That's why they went to one of their main software partners, Adobe, maker of Photoshop, and asked them to develop a consumer version of their photo editing software for the Mac. To their surprise, Adobe refused, as the company didn't believe in the digital hub strategy and was already having a hard time porting their existing apps to the new OS X platform. That's why Apple started releasing the so-called iApps one after the other.

The iApps were a digital suite of applications that eventually evolved into iLife, which Apple branded as *"Microsoft Office for the rest of your life."* They all had the same purpose of making our emerging digital lives easier. In addition to iMovie, iDVD and iTunes, iPhoto was released in 2002, followed by iCal later that year, GarageBand (for recording and editing music) in 2004, and iWeb (for making websites) in 2006. The reason Apple was able to develop such breakthrough software so rapidly was mainly Mac OS X, with its object-oriented environment inherited from NeXTSTEP.

Although the iApps were really the foundation for Apple's future lead in the consumer electronics business, that's not what they were envisioned for. They were intended as killer apps, i.e. apps that would compel consumers to buy a Mac just so that they could use them. More precisely, they were supposed to entice Windows users to switch to the Mac, as there was no similar complete digital-life solution on their platform.

"5 down, 95 to go"

The digital hub strategy itself was just one part of Steve's greater plan to finally gain market share in the PC market. Since he had returned to Apple, the Cupertino company was stuck at around 5% of the overall PC market, even though most industry analysts acknowledged the superiority of its operating system, and the innovations in its hardware.

One other plan was an aggressive TV campaign called "Switchers". Its ads showed several former PC users who had switched to the Mac and were describing how it had made their life so much easier. The purpose of the campaign was to encourage people who were thinking of switching but

were a little afraid to do so, by showing them someone who had made the change and was happy with it.

Yet the riskiest strategic move Apple did to seduce Windows users was to get into the retailing business.

It was far from an obvious choice. Once again, there was a consensus in the industry that brick-and-mortar computer retailing had had its day. The new model was Dell, which only shipped computers directly to customers after they were purchased on its website. The one company that had their own computer boutiques, Gateway, was actually closing them because they were huge money sinks.

But Steve's vision was different. He understood that Windows users wouldn't even consider Apple unless they would actually see how Macs worked and could help them run their digital lives effortlessly. He envisioned "lifestyle stores" that would showcase Apple's products working with digital devices, that people could pick up and test drive on the spot. The stores would be in very expensive locations, in popular malls or in the center of shopping districts.

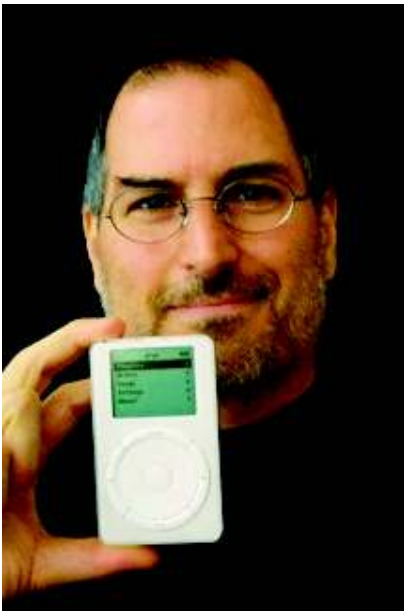
To help get into retailing, Steve had former Gap executive Mickey Drexler join the Apple board as early as 1999, then hired Ron Johnson away from Target in late 2000. After months of experimentation, Apple inaugurated their first Retail Store in May 2001, in the midst of the industry's post-Internet bubble crisis. Almost every expert agreed they would turn out an expensive mistake...



Steve Jobs behind the Genius Bar at New York's SoHo Apple Retail Store in 2002. Notice the huge black and white photographs, so typical of him.

The iPod revolution

1,000 songs in your pocket



Although Mac OS X, the digital hub strategy, the breakthrough hardware and the retail stores all played a role in Apple's renaissance, they were not the essential key that made it all come together. As you probably know, that key was a little shiny white device the size of a pack of cigarettes called the iPod.

The iPod was of course an integral part of Apple's vision of the digital lifestyle. When they looked at the big picture, they realized that, unlike the digital camera and camcorder markets, the digital music player market did not yet offer compelling products to work with your Mac. That's how the idea of making such a device in-house arose, in early 2001, after iTunes was introduced and the company started focusing on the digital music revolution.

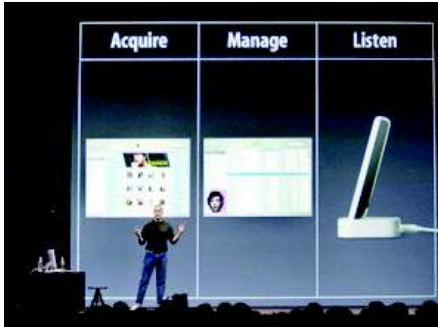
Just like iTunes, Steve Jobs wanted to get a product out to market quickly, to catch up with the rest of the industry. That's why he turned to an outside engineer, PortalPlayer founder Tony Fadell, who had notoriously tried to sell his prototype of a little MP3 player to several consumer electronics company. Fadell joined Apple in February 2001, and the iPod shipped only nine months later, in late October 2001, just in time for the holiday season.

The original iPod distinguished itself from its competition for several reasons. Apart from its gorgeous look, its click wheel and user interface made browsing through one's music collection very easy and fast; it had a hard drive which could store up to 5GB, or *"a thousand songs in your pocket"*, which was Apple's tag-line for the new product; it connected to your Mac via FireWire, which was 30 times faster than your typical USB MP3 player; and it synced with iTunes seamlessly: you just had to plug it in, and the software took care of the rest.

There was simply no other MP3 player that matched any one of those breakthrough features. iPod quickly became a very, very hot product for music lovers... and digital pirates. It was quickly acknowledged as *"the Walkman of the digital age"*, as even Windows users either hacked it or moved to the Mac just so that they could use it.

Apple was confused about how to react to this unexpected success. They could decide to continue limiting iPod to Macs, so that it would entice PC users to switch; or they could make it Windows-compatible, which would broaden their target and show users unfamiliar with Apple how good their products could get. At Macworld New York in July 2002, Steve announced they had opted for the second solution.

The iTunes Music Store



Steve Jobs introducing the iTunes Store on Apr. 28, 2003

Once Apple had step foot in the music business with iPod, they started looking at content. At the time, most people either ripped their CDs on their Macs or downloaded music illegally on peer-to-peer networks.

Recognizing they were in a unique position to do so, Apple decided to try and come up with a legal solution by building an online music store. They had enough experience to do so thanks to their own popular online store on apple.com, as well as their QuickTime movie trailers, which had taught them how to handle massive downloads on their servers.

Moreover, they were able to negotiate with the music companies because they were still a niche player. The majors were trying hard to fight Napster, but they were reluctant to launch online stores, afraid that it would destroy their current business model. But iTunes could only run on Macs, which were still a fraction of the PC market — so they viewed Apple's proposal as an opportunity to try a new model with limited risks.

Steve Jobs used his negotiation skills to have the labels agree on a unique price: \$0.99 for each track, and \$9.99 for whole albums. Although Apple would not get much from the iTunes Store, they expected it to drive iPod sales, as purchased music could only be played on their player.

So, on April 28 2003, Steve unveiled the iTunes Music Store at a special Music event. The results quickly exceeded the company's best hopes. Five million songs were sold in just eight weeks, and another eight million in the following fifteen weeks, bringing iTunes' share of legal music downloads to 70% — yet it was still only Mac-compatible!

Unexpected success

It was the first viable business model for selling music online. Everybody was happy: the labels, who finally saw a way to defeat Napster; Apple, whose sales of iPod were boosted; and of course the customers, who were finally offered a seamless and legal way to acquire music. As a result, the labels agreed to let Apple extend its business, and on October 16 2003, Steve Jobs introduced the company's second app for Windows (the first was its QuickTime Player): iTunes, *"the best Windows app ever written"*. Windows iPod users would finally be able to sync their device on Apple's software, and, more importantly, every PC user could now purchase music on the iTunes Store.

It was the start of a revolution. iPod was already a success, but it was now becoming a cult object, a music player so successful that it embodied the digital music era all by itself — the same way Sony's Walkman had come to symbolize the portable music era some twenty years earlier. Steve was thrilled: his products were finally recognized for their value, they were finally adopted by the masses. Unlike the Mac's 5% market share, as of

January 2004, iPod was enjoying a 30% market share (by units sold), making it the leader of the portable music players market.

As Steve often pointed out, only Apple could make the iPod. The reason was, there was simply no other company out there that still knew how to make both great hardware and great software. In the computer business, there were PC manufacturers on one side, and software developers on the other. As for the consumer electronics business, they could never come up with advanced software such as iTunes, which made the iPod experience so effortless. What had always been designated as Apple's greatest flaw turned out to be their greatest strength in the emerging digital consumer electronics market. Steve saw that unique opportunity — and he grabbed it.



Apple is strong

Revolution in Cupertino

Steve Jobs didn't let Apple rest on its laurels.



The iPod was a hot product, but it belonged to a niche market: the high-end hard-drive MP3 players. There were still zillions of little Flash players that were a lot cheaper and got sold for that. Apple went after them as well: at Macworld in January 2004, Steve unveiled the iPod mini, a smaller version of the iPod which came in colors and soon became the best selling MP3 player in the world. Exactly one year later, he introduced the iPod shuffle, a cheap, Flash version of the iPod, to go after the rest of the competition. It worked: as of early 2006, Apple's market share in the music player space was around 70% — it still is today. The company improved its product line every year, introducing the iPod nano in September 2005, and the iPod video the following month. Every year after that, the iPod line was refreshed every September.

In the music distribution business, the iTunes Store was gradually expanded to foreign markets: a European Store was announced in June 2004, and was followed by a Japanese Store a year later. iTunes' market share kept growing, reaching 85% of legal music downloads as of January 2006 — at the expense of other music download websites, but also the traditional distribution channels.

The exponential growth of iPod sales, the new iTunes business, the ever-expanding retail operations (Apple had more than 100 stores open in 2005 throughout the US and a couple abroad, all of which were profitable) — all contributed to Apple's phenomenal expansion from 2004 on. This was a change in scale that was unprecedented in the company's history. As Steve Jobs put it:

We're in uncharted territory. We've never sold this many of anything before.

Steve Jobs, CNBC interview, September 2006

The company hired engineers at an incredibly fast rate, and they couldn't even fit in the firm's campus in Cupertino. Steve actually announced to the city council that they were planning the construction of a second campus in April 2006.

The day hell froze over

The Mac business was starting to rise — finally. The risky Trojan horse concept — iPod would seduce Windows users into switching to the Mac — seemed to be working, together with the unexpected success of the Apple Retail Stores.

The company expanded and adjusted its product line, careful to the market's reaction. The days of the simple four-product matrix were long gone. First was the Power Mac G4 Cube, that we already talked about, halfway between the consumer and pro desktop lines. It was discontinued in 2001. Then came the eMac, a cheaper version of the iMac G4 with a CRT display, introduced especially for the education market in 2002, and discontinued in 2005. Finally, in January 2005, they released the Mac mini, a stripped-down Mac designed to appeal to switchers, the cheapest Mac ever at \$499.

On the pro side, in 2002, the company entered the high-end server market with the XServe. They also fought hard to catch up with the speed performances of the Wintel platform, and in June 2003, they unveiled the G5, a new chip they had developed with IBM that they claimed was the fastest in the world.

But the biggest move was announced in June 2005, at Apple's annual developers conference, WWDC. The company had just finished its complete transition to OS X after the release of Mac OS X 10.4 Tiger, which was adopted by a very large majority of Mac users. That day, Steve Jobs came on stage and announced to a stunned audience that Apple was going to switch away from IBM to using Intel processors in their Macs.



Steve Jobs announces Apple's switch to Intel at WWDC 2005

This was close to a cultural shock to many developers and avid Mac followers. For years, the company had been making fun of Intel, the main provider of chips used in Windows computers. Intel was always depicted as a slow, almost retard company, whose chips didn't even compare to the ones Apple used.

But something changed in 2004. After one year of using IBM's new chip, the G5, in their professional workstations, Apple still didn't manage to put the chip into their pro notebooks. IBM also failed to deliver on their promise of making a 3GHz processor within a year. The situation really became embarrassing when, in September 2004, Apple unveiled iMacs that ran on G5s while its PowerBooks were still using their previous-generation processors, the G4. The problem with the G5 was its power consumption: it just required too much energy to fit inside a laptop.

That's why Apple started talking to Intel, planning to use their much more power-efficient chips in future Macs. This change would have been impossible had Apple still been using the old Mac OS. But as you recall, Mac OS X was a different story. Its parent system, NeXTSTEP, had already been ported to Intel in 1993. The OS was platform-independent: it could run on any kind of computer. That's why Apple developed Intel versions of its OS since version 10.0, in case they would have to use it someday — and that day came in June 2005.

Apart from the ability to make powerful notebooks, there was a strategic reason to switch to Intel. For years, Apple had suffered from unjustified critics from the PC world, claiming their computers were slower. From then

on, Macs would be using the same hardware components as any Windows PC. Moreover, the Macs would now be able to run Windows natively! This was a very powerful message to potential switchers who were afraid some of their favorite software would not run on the Mac. They could turn their Mac into a Windows PC by simply rebooting, using an Apple software called Boot Camp. There simply was no compelling argument not to switch to the Mac anymore, other than price.

The move to Intel was decisive in Apple's fight against the Windows supremacy. Given his company's growing momentum, Steve appropriately concluded his WWDC keynote address with the words: *"Apple is strong"*.



Steve and the Magic Kingdom

Tensions

Let's go back a couple of years earlier and look at the changes at Steve's other company, Pixar. The animation studios released success after success: following *A Bug's Life* (1998) and *Toy Story 2* (1999), their fourth movie, *Monsters Inc.*, released in 2001, had generated more than \$520 million in gross revenue worldwide. The company had expanded and was prepared to release a new movie every two years. Because it had so many more employees, it moved to a [brand new, expansive campus in Emeryville](#), a small industrial town outside of Berkeley, in late 2000.



Michael Eisner, Steve Jobs and Roy Disney at the premiere of *Monsters Inc.*

However, the relationship with Disney was turning bitter. The Walt Disney Company's CEO, Michael Eisner, had never gotten along with Steve Jobs. It was obvious to any observer that there was a huge personality clash between the two of them.

The first problems emerged after the release of *Toy Story 2*. Eisner asked Pixar to work on yet another sequel, *Toy Story 3*, and even convinced Lasseter to do so. The problem was that such a sequel would not count as an "original movie" as stipulated in the five-picture deal signed by both companies in 1997. If such a sequel was released, Disney would get seven Pixar films for the price of five, so to speak. It was out of the question for Steve Jobs.

Tensions between the two bosses reached their climax when, in 2002, while Eisner was speaking about digital piracy in front of a Senate Committee, he told them that computer companies actually benefited from such illegal actions. The example he took was Apple and its advertising campaign for iTunes, whose slogan was: *Rip. Mix. Burn.* — making a confusion between "rip" and "rip off". It was obviously a personal revenge on Steve Jobs, who was quick to react. He called up Roy Disney, Walt's nephew, and confided to him that Pixar would not make a new deal with Disney as long as Eisner was still in charge.

In the spring of 2003, Steve Jobs came to Disney to negotiate the next deal between the two companies. His demands were so unacceptably high that it was obvious he had crafted them just so they would be refused. He asked for 100% ownership of Pixar's films — Disney would only get a 7.5% distribution fee. Moreover, their distribution exclusivity would be limited to five years. Disney's only privilege was the right to use Pixar's characters in its theme parks. Of course, Eisner refused, and Steve left, officially announcing he was looking for a new distributor.

Divorce

In early 2004, Steve faced Pixar's shareholders at the company's earnings conference call. It was the first time since the company's IPO that its future

was not tied to its contract with Disney. However, Steve was pretty confident, especially after the success of the studios' latest release, *Finding Nemo*, which eventually became the highest-grossing animated movie in history and an Academy Award winner.

Steve mentioned an email that Michael Eisner sent to Disney's board of directors before *Finding Nemo* was released, in which he said the new movie was "*nowhere near as good as their previous movies.*" "*As you know, things turned out a little different*", Steve joked. Then he discussed Pixar's concern about Disney's right to make sequels to Pixar's first movies:

We feel sick about Disney doing sequels, because if you look at the quality of their sequels, like The Lion King 1/2 and their Peter Pan sequels and stuff, it's pretty embarrassing.

He ended the conference by reassuring the shareholders, saying he had had calls from four other major studios who seemed more than willing to distribute Pixar's films in the future. The relationship with Disney was dead and buried.

Save Disney

However, change at the Magic Kingdom made way for quite a different future. Indeed, increasingly exasperated by Eisner's management — including his fight with Pixar, Roy Disney had publicly announced he was resigning from the company's board in November 2003. Shortly afterwards, he started a public campaign called *Save Disney* whose sole purpose was to oust the current CEO. He got support from prominent figures in the animation business, as well as thousands of individual Disney shareholders.

To the surprise of many, the campaign worked. At Disney's annual shareholders meeting, in March 2004, the vote of confidence to renew Eisner's position only garnered 57% of the votes. It was unheard of in the company's history. The board took notice, and some six months later, the CEO announced he was going to retire the following year. His successor would be the company's COO, Bob Iger.

The day he was informed of his promotion, Iger phoned both Steve Jobs and John Lasseter to pay his respects. He made sure they understood that the hateful days of Eisner were over.

The merger

In the summer of 2005, Steve Jobs and Bob Iger met in person in a very different context. Steve didn't come as head of Pixar, but as Apple's CEO. He was working on the next-generation iPod, which would be able to play video. However, there needed to be some way to acquire video content legally, or Apple would be accused of supporting piracy again. That's why part of the announcement would be the launch of an expanded iTunes Store, where one could buy TV shows. As it happened, the two most

successful TV shows in the US, *Desperate Housewives* and *Lost*, were both owned by ABC, whose parent company was no other than Disney.

Apple made a deal with Disney to sell both shows and a couple more on iTunes, and Iger went on stage during Steve's keynote to announce it to a stunned audience of journalists and media experts. The handshake between the two CEOs was a strong signal that a new cooperation between Pixar and Disney was increasingly likely.

Yet very few people envisioned the scope of that renewed partnership. Iger proposed to Jobs no less than merging both companies. He said he understood that Pixar was the only creative force that Disney could rely on for its future in animation. After making sure that the animation studio would keep its independence — staying in Emeryville and keeping its logo — Steve signed a deal for Disney to buy Pixar for \$7.4 billion. That was a lot by any standard, given the company's revenues — but Iger was willing to pay it for John Lasseter's leadership in animation. The merger was announced on January 24, 2006, at Pixar studios in Emeryville.

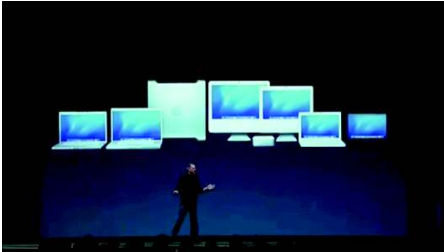


John Lasseter, Steve Jobs, Bob Iger and Ed Catmull announce the Disney-Pixar merger to Pixar employees in January 2006

Under the terms of the deal, Steve Jobs, who still owned close to 50% of Pixar's stock, became Disney's single largest individual shareholder, with a share of 7%. Ed Catmull, Pixar's former president, was named president of the combined Disney-Pixar studios, while John Lasseter was chief creative officer. Steve was now an influential board member of the Walt Disney Company, a position he still holds today. That left him with even more time to concentrate on Apple.

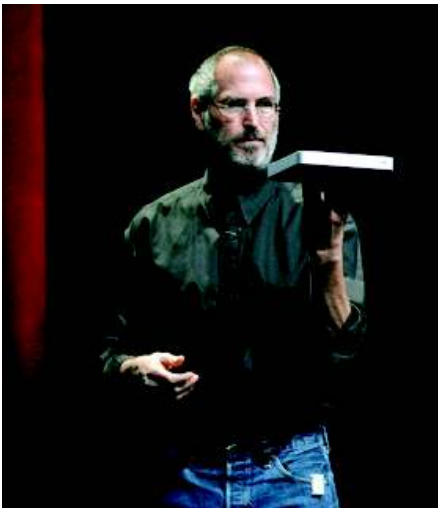
Apple Inc.

Apple's momentum



The company's decade-long fight to gain market share in the PC industry, especially in the consumer market, was actually finally starting to pay off around 2006. The transition to Intel was rapid yet smooth. The entire product line was ported in less than a year: it started with the iMac and the pro notebook, re-christened the MacBook Pro, in January 2006. Then came the Mac mini in February, followed by the MacBook (replacing the venerable iBook) in May and the Mac Pro (former Power Mac) and XServe in August.

All of these new Macs sold very well, especially the MacBooks and the consumer desktop, the iMac. But, inspired by its success with the iPod, Apple was starting to expand outside the computer industry into consumer electronics. Steve Jobs finally saw his dream of making Apple *the Sony of the digital age* materialize. His vision was encouraged by the brand's undeniably powerful image thanks to the iPod, as well as the incredibly hot Apple retail stores. Indeed, the stores had been designed as lifestyle boutiques demonstrating the power of Macs to run your digital life — that concept obviously worked very well with consumer electronics too.



Steve unveils a prototype of Apple TV in September 2006.

In February 2006, Steve unveiled the iPod hi-fi, a stereo speaker system designed to work only with iPods. He claimed its quality was rivaling with high-end, \$10,000 audio systems, while it cost only \$349. The market thought otherwise, as the product flopped and was discontinued in September 2007. The company gave it another shot with the Apple TV, originally known as iTV, a wireless set-top box that basically linked your Mac with the widescreen TV in your living room. The Apple TV was officially released at Macworld 2007, but it has yet to prove itself as a successful product.

iPhone

Since you are such well-informed readers, you probably already know that Apple's biggest move outside its computer and music businesses was announced at Macworld in January 2007: it is the iPhone.

The iPhone project started in 2003 — although rumors about such a product had circulated even before that, with the much-hyped Apple PDA. The basic idea was to build a digital convergence product, the ultimate digital device that would combine a phone, PDA, and iPod. Actually, Apple had already moved into the phone business with the Motorola ROCKR in late 2005 — a standard chipset that was compatible with iTunes. But the product was lame, and it was just a temporary solution before Apple came up with its own phone.

One of the first thing Steve Jobs did before developing iPhone was to go to the cell phone carriers. He talked to them separately in early 2005, promising to build a device *"light-years ahead of anything else"*. He soon made a deal with America's #1 carrier, Cingular. The provider knew that the only way to increase its profits was not by competing on price, but by charging users for their increasing use of data online. Since the iPhone was going to surf the Web, it fit their strategy pretty well.



Steve Jobs with Cingular's Stan Sigman

By looking at Apple's deal with AT&T, one has once again to wonder at Steve Jobs' extraordinary negotiation skills. Before iPhone, wireless carriers treated handset manufacturers like slaves. They used to dictate the phone's features, pricing and marketing, in exchange for the right to use their networks. The iPhone deal completely reversed this balance of power. AT&T-Cingular begged Apple for five years of exclusivity and a 10% margin for sales in its stores, just so they could be the one carrier to support iPhone. Apple kept complete control over design, manufacturing and marketing — and they even managed to garner \$10 a month from every iPhone Cingular plan. AT&T didn't even see iPhone until a couple of weeks before it was introduced in January 2007: although such secrecy was common at Apple, it was unheard of in the cell phone industry.

Work on the iPhone really intensified by early 2006. The product was, once again, a tribute to Apple's unique ability to innovate in the consumer electronics industry. It was a miracle of the marriage of hardware and software, and Apple was the only company that excelled in both. On the software side, it used Mac OS X, the exact same system that was used on Macs. This made iPhone potentially able to run any kind of Mac software. As for hardware, its most revolutionary feature was its touch-screen display, a technology Apple originally developed for a tablet PC... that would eventually be introduced three years later (iPad, folks!). The development of iPhone had its share of tough drawbacks, especially when it was almost restarted from scratch in fall 2006. But the prototype was eventually ready for Macworld, on January 9 2007.



That day, when Steve took the stage at Moscone Center in San Francisco, he told his audience they would making some history together. He knew iPhone would be one of the most important product in Apple's history, one that would set its destiny for decades to come. This little box less than half an inch thick was the ultimate digital pocket device, a computer/iPod/phone that allowed its owner to make calls, take photos, handle contacts and email, browse the Web, listen to music and watch movies in a powerful yet incredibly easy fashion that was unmatched by any of its predecessors.

iPhone is five years ahead of what everybody else has got. If we didn't do one more thing, we'd be set for five years!

Steve Jobs, Newsweek interview, January 2007

To concretize Apple's transformation — obvious as it was at the end of his Macworld keynote, after he had introduced both iPhone and Apple TV — Steve announced that the company's name was going to change from

"Apple Computer Inc." to just "Apple Inc." (watch it in the [Movie Theater](#)). It was now official: after thirty years, the fruit company had helped turn the turbulent prince of Silicon Valley into the king of the digital age.



Difficult times

Although Steve's "*Second Coming*" (to use biographer Alan Deutschman's words) is regarded as one of the most spectacular success stories in the history of business, recent years have not been all that rosy for the iCEO.

The backdating scandal

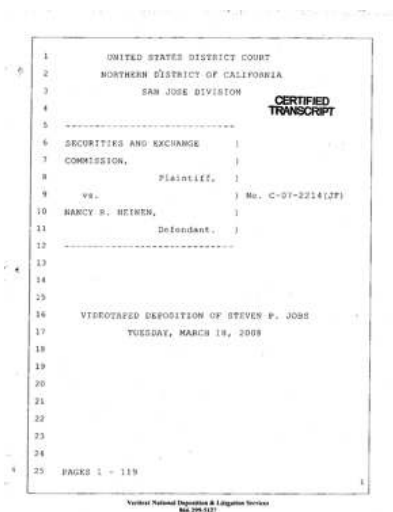
Backdating is an illegal accounting process consisting of picking a date in the past, when a stock's value was lower, to assign the exercise price of options. It basically involves faking documentation and lying to investors. Although backdating is unlawful, it was common practice in Silicon Valley for a long time — until a 2006 *Wall Street Journal* article exposed it, denouncing a number of highly-regarded public companies. Apple was not cited by the *Journal*, but it decided to hire a special legal committee to do an in-house investigation on its own situation. These lawyers unveiled they had discovered "*irregularities*" involving more than 6,000 grants in the 1997-2001 timeframe.

The complete story was revealed later, after the SEC investigation. Steve Jobs was actually directly involved with two illegal procedures related to backdating.

The first happened in October 2000. The global state of the tech industry was disastrous, because of the burst of the dot-com bubble. Several companies were trying to sway talented executives away from their competitors, and Apple was a popular target. Steve decided to give some of his top executives a substantial team grant to serve as golden handcuffs. But Apple's legal counsel failed to deliver the grant on the date that had been agreed upon — which was problematic since the stock had gone up in the meantime. As a remedy, the options were backdated from their actual delivery date of Feb. 7 to Jan. 17 — with Steve's agreement.

The second irregularity involved Jobs himself. From 1997 on, he had refused to get more than \$1 in annual salary from Apple. His official claim, especially when he first arrived as interim CEO, was that he was there "*to help*" and not for the money. The \$1 was there only so his family could be on the company's health benefits plan. But, in January 2000, after it was clear Apple had resurrected during his tenure, and after he had announced he was becoming full-time CEO, the board agreed to compensate him. First, by buying him a [private Gulfstream V jet](#), with taxes — which amounted to \$88 million. Second, by giving him a 40 million options mega-grant, i.e. approximately 6% of the company.

But when it was time for these options to vest, the dot-com bubble had burst, and Apple's stock price was worth only half what it was the year before. Steve came to the board asking for new options:



Everybody likes to be recognized by their peers, and the closest that I've got, or any CEO has, is their Board of Directors. [...] I spent a lot of time trying to take care of people at Apple and to, you know, surprise and delight them with what a career at Apple could be — could mean to them and their families. And I felt that the board wasn't really doing the same with me. [...] So I was hurt, I suppose would be the most accurate word, and, you know, the board had given me some options, but they were all underwater [...] and here I had been working, you know, I don't know, four years, five years of my life and not seeing my family very much and stuff, and I just felt like there is nobody looking out there for me here, you know. [...] So I wanted them to do something, and so we talked about it.

I thought I was doing a pretty good job. [...] I'd wished they had come to me and said, "Steve, we've got this new grant for you," without me having to suggest anything or be involved in anything or negotiate anything. That would have been much better from the company's point of view because it would have made me feel better at that time.

Steve Jobs' deposition in front of the SEC, March 2008

The directors agreed to give him a new batch of 15 million options in August 2001. However, Steve only agreed on the condition they would replace his 2000 40-million-option grant, having suffered from the public criticism he had faced the year before. This turned out to be impossible because of accounting complications — which dragged the negotiations until December 2001. The price of Apple stock had gone up again, so Apple's legal counsel Nancy Heinen arranged for fake paperwork to date the options back a month, corresponding to \$20 million more for Steve's pockets. However, he never cashed in those options, and actually traded them for 10 million restricted shares in March 2003. As of early 2008, those shares were worth \$1.2 billion pretax, compared to the \$5.8 billion pretax of the 2003 grant — Steve did a bad deal for a change.



Nancy Heinen

After several weeks of reviewing those facts, the SEC announced in April 2007 that they would file charges against Apple's former legal counsel Nancy Heinen — for the backdating of the two grants of options mentioned above — and its former CFO Fred Anderson, for negligence over one grant. Anderson settled the charge by paying a \$3.6 million fine, but used the occasion to publicly denounce the commission's exoneration of Steve Jobs: the CEO was aware of the backdating, since he picked up retroactive dates himself. However, the SEC did not react, and did not personally sue Steve. They also did not sue Apple itself, citing the company's "swift, extensive, and extraordinary cooperation," including its "prompt self-reporting, an independent internal investigation, the sharing of the results of that investigation with the government, and the implementation of new controls designed to prevent the recurrence of fraudulent conduct."

The case was closed in August 2008, when Nancy Heinen agreed to pay \$2.2 million to the SEC — including the reimbursement of her illegal gains on the backdated options, and a fine. The commission had cleared Steve Jobs, confirming Apple's own statement that, although he "was aware of or recommended the selection of some favorable grant dates," it didn't amount to misconduct, because he "was unaware of the accounting implications."

However the case tarnished his image and caused debates about the future of the company when he would be gone — since at some point it was feared he could have been thrown out of the company by the government.

Health problems

However the most serious troubles Steve had to face in recent years were not legal ones, but medical ones: in October 2003, while performing a routine abdominal scan, doctors discovered a tumor growing in his pancreas. Usually a pancreatic cancer is quick to kill you — but not in Steve's case. He was suffering from an islet cell neuroendocrine tumor, one that can be removed by surgery and usually leave the patient with some ten more years on earth, or more.

But Steve Jobs was no ordinary patient. True to the Eastern mysticism of his youth and his strange yet deep beliefs about medicine and food, he stubbornly refused to have the surgery, sticking to a special diet that he thought would cure him from his cancer. This lasted for nine long months, while his family and Apple's top people got increasingly concerned about him. However, observing that his situation was not improving, he reluctantly agreed to have the surgery in August 2004, at the Stanford Medical Center. It was only then that the news were made public, with Steve himself writing a letter to Apple employees from his hospital bed. He took one month off and came back as CEO in September, assuring everyone he was "cured." This first event was felt as a shock by the Apple community worldwide, but it was even more shocking to the company's shareholders, who argued that they should have been aware of the CEO's diagnosis early on, given his importance to the company. Most lawyers did agree that such move wasn't mandatory though, since Jobs had a right to protect his privacy.

Steve mentioned this difficult period of his life in his memorable commencement speech at Stanford in June 2005.



About a year ago I was diagnosed with cancer. I had a scan at 7:30 in the morning, and it clearly showed a tumor on my pancreas. I didn't even know what a pancreas was. The doctors told me this was almost certainly a type of cancer that is incurable, and that I should expect to live no longer than three to six months. My doctor advised me to go home and get my affairs in order, which is doctor's code for prepare to die. It means to try to tell your kids everything you thought you'd have the next 10 years to tell them in just a few months. It means to make sure everything is buttoned up so that it will be as easy as possible for your family. It means to say your goodbyes.

I lived with that diagnosis all day. Later that evening I had a biopsy, where they stuck an endoscope down my throat, through my stomach and into my intestines, put a needle into my pancreas and got a few cells from the tumor. I was sedated, but my wife, who was there, told me that when they viewed the cells under a microscope the doctors started crying because it

turned out to be a very rare form of pancreatic cancer that is curable with surgery. I had the surgery and I'm fine now.

Steve Jobs' Stanford Commencement Speech, 12 Jun 2005

Of course, as you noticed, Steve didn't mention his nine-month refusal to have surgery and his special diet techniques.

The case seemed closed for a while, before it surprisingly resurfaced some three years later, in 2008. First came rumors following Steve's public appearances at Macworld in January, but especially at WWDC in June 2008. He obviously had lost weight in a substantial and even frightening way during those six months. Many blogs and dedicated websites speculated his cancer had come back. Because of increasing pressure from journalists, Apple's spokeswoman Katie Cotton had to issue a public statement after the WWDC keynote, confessing Steve was suffering from *"a common bug."* Considering Steve's gaunt appearance, many people found it hard to believe. They didn't feel more relieved when, the following month, CFO Peter Oppenheimer declared at the company's earnings conference call that: *"Steve's health [was] a private matter."* As if to make things worse, press agency Bloomberg accidentally published Jobs' obituary in late August 2008. It is common practice in the media to keep such obituaries ready in case of emergency — but the publication obviously added concern to the issue of Steve's health.

Steve himself reacted to the news in his September 9 Music Event, using a famous quotation from Mark Twain:



He reiterated in his October 14 event Media Event, when he told journalists his blood pressure was 110/70: *"and that's all we're gonna talk about Steve's health today"*. Although most laughed at the joke, hardly any of them failed to notice that, in addition to his still alarmingly frail look, he unusually shared the stage with several executives — most notably Apple's #2 Tim Cook and Senior VP of Design Jony Ive, keeping only the introduction of the new laptops for himself.

Unfortunately, those growing concerns eventually proved justified. On December 16, Apple made a shocking announcement:

Apple today announced that this year is the last year the company will exhibit at Macworld Expo. Philip Schiller, Apple's senior vice president of Worldwide Product Marketing, will deliver the opening keynote for this year's Macworld Conference & Expo, and it will be Apple's last keynote at the show.

Although the demise of Macworld seemed inevitable to many, as the company did progressively scale back from its trade shows one after the other, the real shock was that it wouldn't be Steve, but head of marketing Phil Schiller, that would appear on stage for the last Macworld keynote in history. There was no doubt that the CEO, who hadn't missed a single Macworld keynote since his return (except Apple Expo 2004, one month after he had his cancer surgery), was simply not in good enough health to go on stage and face Apple's fans (including your fellow webmaster).

Because of the stream of reactions that the statement caused, Steve once again made a personal announcement on Apple's website on January 5, 2009, the day before Macworld. He explained his medical situation in those terms:

As many of you know, I have been losing weight throughout 2008. The reason has been a mystery to me and my doctors. A few weeks ago, I decided that getting to the root cause of this and reversing it needed to become my #1 priority. Fortunately, after further testing, my doctors think they have found the cause—a hormone imbalance that has been “robbing” me of the proteins my body needs to be healthy. Sophisticated blood tests have confirmed this diagnosis.



Apple COO Tim Cook

Steve said he would remain CEO during his recovery. He contradicted himself some nine days later, in an email to all Apple employees that was made public:

During the past week I have learned that my health-related issues are more complex than I originally thought. In order to take myself out of the limelight and focus on my health, and to allow everyone at Apple to focus on delivering extraordinary products, I have decided to take a medical leave of absence until the end of June.

The CEO would continue to oversee key strategic orientations, while he left most of the day-to-day tasks to his second-in-command, COO Tim Cook, as he had already done in 2004. As a result, the company and the whole Apple community learned how to live without Steve Jobs for half of 2009. This was a historic moment, reminding everybody of the simple truth that Steve was not eternal.

It would be later revealed that Steve underwent a liver transplant in April 2009. It actually is not uncommon for his type of pancreatic tumor to metastasize in other organs, including the liver. According to Philip Elmer-



DeWitt, author of the Apple 2.0 blog at CNNmoney.com, Steve's *"lost his gall-bladder, part of his stomach, part of his pancreas, the upper end of his small intestine and now has someone else's liver, which probably means he'll be on immunosuppressant drugs for the rest of his life."* *"That can't be fun,"* he added. The transplant took place at the Methodist University Hospital in Memphis, Tennessee, one of the nation's leading center for such surgery. The hospital officially disclosed that Jobs *"received a liver transplant because he was the patient with the highest MELD score (Model for End-Stage Liver Disease) of his blood type and, therefore, the sickest patient on the waiting list at the time a donor organ became available."*

The transplant worked, and Steve went back to Apple in late June 2009, as planned. It wasn't long after that that the Wall Street Journal ran a story about Steve *"being back at Apple and focusing on [the] new tablet"*, with employees complaining they *"had to readjust"* to their boss's demanding habits. Good old Steve was definitely alive and well. He eventually proved it at the September 9 2009 Music Event, when he was welcome on stage by a standing ovation from Apple employees and several hundreds of journalists (watch it in the [Movie Theater](#)) — before unveiling exciting new iPods, as he had done in the previous four years.

2010: Steve is back. Again.

After an almost entire year of complete absence from the media scene, due to his health problems, Steve has made an impressive comeback in 2010. The charismatic CEO has taken the public spotlight several times during that year, often to make game-changing announcements.

iPad

The biggest of all was undeniably on January 27, when Steve Jobs finally introduced iPad, Apple's much-anticipated tablet. There were rumors on an Apple tablet even before there were rumors on an Apple phone, and for good reasons: the labs of Cupertino started working on a tablet years before they worked on iPhone.

I actually started on the tablet first. I had this idea of being able to get rid of the keyboard, type on a multitouch glass display. And I asked our folks, could we come up with a multitouch display? that I could rest my hands on, and actually type on. And about six months later, they called me in and showed me this prototype display. And it was amazing. This is in the early 2000s. And I gave it to one of our other, really brilliant UI folks, and he called me back a few weeks later and he had inertial scrolling working, and a few other things. Now we were thinking about building a phone at that time, and when I saw the rubber band, inertial scrolling and a few of the other things, I thought My God, we could build a phone out of this. And I put the tablet project on the shelf, because the phone was more important. And we took the next several years, and did the iPhone.

Steve Jobs at the D8 Conference, 1 June 2010

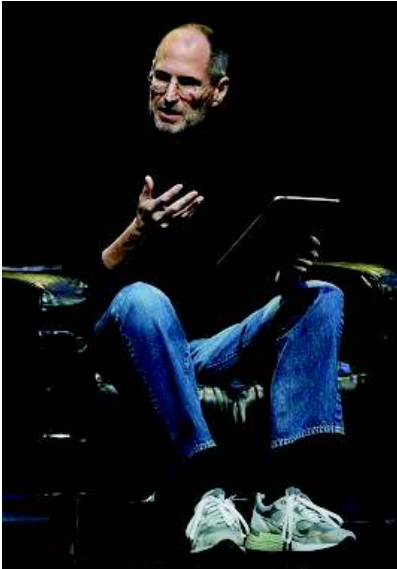


Throughout 2009, even before Steve Jobs came back from his medical leave of absence, the Apple rumor mill started spinning again with increasing confidence about an upcoming incredible device, a handheld tablet halfway between a Mac and an iPhone. The rumors went even crazier after Steve Jobs presented a prototype of the device to several major US publishers, who couldn't help talking about it off the record. The Wall Street Journal's Walt Mossberg, one of Steve Jobs' favorite industry analyst, reported early on that :

It's better than the average movie experience, when you hold this thing in your hands.

Expectations were high to say the least.

Then, on January 27, Steve Jobs finally took the stage and unveiled iPad to the world. The presentation was bare, almost simplistic, with Steve sitting on a couch and demoing the device for most of his keynote.



iPad disappointed the majority of analysts at the time. It was deemed “a bigger iPod touch”, nothing else. Steve was being mocked for calling it “a magical device” during his keynote, and in Apple advertising too!

Yet, once again, the market proved the critics wrong, and iPad turned out an amazing success. Apple sold 7.5 million of them as of September 2010, representing close to 8% of its 2010 fiscal-year revenues (iPods amounted for 13%).

Asked what his feelings about iPad were at the famous All Things D conference in June 2008, Steve Jobs boldly made the following comments :

When we were an agrarian nation, all cars were trucks, because that's what you needed, on the farm. But as vehicles started to be used in urban centers, and America started to move into those urban, then suburban centers, cars got more popular and innovations like automatic transmission and power steering and things that you didn't care about in a truck as much, started to become paramount in cars. And now, probably [...] one out of every 25 vehicles is a truck, where it used to be 100%... PCs are gonna be like trucks. They're still gonna be around, they're still gonna have a lot of value, but they're gonna be used by one out of x people. [...] And this transformation's gonna make some people uneasy — people from the PC world, like you and me. It's gonna make us uneasy, because the PC's taken us a long ways — it's brilliant. And we liked to talk about the post-PC era, but when it really starts to happen, I think it's uncomfortable, for a lot of people [...] So... I think that we're embarked on that.

Steve Jobs at the D8 Conference, 1 June 2010

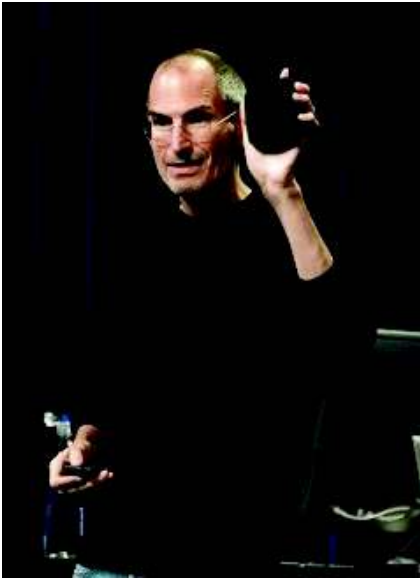
It is worth thinking about these comments for a minute. If we assume Steve Jobs is right about this, and almost everyone (but Microsoft's Steve Ballmer) agrees he is, then he will be a unique case in history of someone who has been instrumental in both creating and putting an end to an industry. Indeed, Apple was a key player in starting of the personal computing revolution in the early 1980s, and there would not have been an Apple without Steve Jobs. But Apple will also likely be the company leading the transition away from the PC, and this time there's no denying this would not have happened so quickly without the iOS mobile revolution... What other man can be credited for such a huge impact on a multibillion-dollar industry?

Apple's possible future

2010 has seen Apple's dominance in the high-tech industry reinforced. The company is the market leader or a dominant player in four huge and growing markets: digital music players (with iPod), digital music distribution (with iTunes), smartphones and mobile apps (with iPhone, iPod touch and the App Store), and tablet PCs (with iPad).

This unique position at the crossroads of the digital revolution, makes the fruit company the subject of many a fantasy. Two trends have constantly re-emerged when speculating on Apple's future.

The first is its take on the television market. Steve Jobs himself has commented at length on it at D8 (again), saying it was impossible for Apple to enter this market because of its structure. He talked about an insoluble go-to-market impossibility.



Yet only three months later, he introduced a revamped, network-based Apple TV at the traditional September Apple Media Event. The new box is iOS-based and most people think it won't be long before it runs iOS apps. To speak more generally, it is very likely that, unlike what Steve Jobs has explained, Apple will try very hard to enter and revolutionize this "other" consumer electronics space that is television, and the Living Room in general — following a strategy that was conceived some four years earlier with iPod hi-fi.

Another controversial issue is that of Apple's relation toward its new arch-rival, Google. This relation is controversial because for several years, Google was not an enemy, but an ally in the war against the behemoth of Redmond, Microsoft. Google's CEO Eric Schmidt even sat on Apple's board of directors for three whole years, from 2006 to 2009. But it's no wonder he left in 2009: by entering the smartphone market with its Android mobile OS (and its own app store!), Google had become a direct competitor of Apple. This conflict of interest was as good a reason for him to leave, as Steve Jobs' shrinking tolerance for what he felt was a plain and simple betrayal.

Google's increasing market share in the smartphone market led many observers to think that the scenario of the 1990s was being played again. Google, in the role previously played by Microsoft, was going to crush the industry innovator, Apple and its closed system, by licensing its "open" software to a myriad of different hardware companies... Steve Jobs supposedly had not learned from his own mistakes, and was going down the wrong path again because of his stubbornness. Of course it's far too early to judge if this opinion is justified or not, but it's fair to say that the fight between Apple and Google will be interesting to watch in the coming decade.

Has Steve changed?

Finally, an old debate about Steve's personality has also re-emerged in 2010: has he changed? Although some of his traits, such as his propensity to take the spotlight then and again to unveil insanely great products to the world, have not changed... People have noticed two minor evolutions in his public persona.

The first is his increasing habit of communicating by writing emails to customers. He has been known to do so for years, and he is famous for reading a ton of them, but never before 2010 had he replied to so many of



Steve Jobs hugs Barbara Ralston of Stanford Hospital during a ceremony to create the nation's first organ donors registry on Oct. 5, 2010

them, so often. Usually, he has used them to publicly respond to hot issues about Apple or to spread rumors himself. Some even pretend he has theorized this method, which is in essence a new way for CEOs to deal with PR, bypassing the traditional press.

Another change is more profound, and has to do with his implication on charity issues. Steve's reputation in Silicon Valley was not very positive on this particular topic, as he was often dismissed for basically being stingy. Yet, in addition to large donations to charities, he spoke publicly twice for the defense of organ donations in 2010, and even played a critical role in the creation of the nation's first organ donor registry in October 2010. This was obviously a praiseworthy side effect of the liver transplant that had saved his life one year earlier.

Conclusion

So here's where we are today. Apple, on the verge of bankruptcy a decade ago, is now one of the most powerful and influential high-tech company in the world. It is the most innovative brand in the computer industry, a leader in the music and phone businesses, and a likely consumer electronics powerhouse for decades to come. As for Pixar, it is the single most successful movie studio in the history of Hollywood, having yet to release a dud after more than twenty years of existence. It has defined the future of animation and is now at the center of this industry after its merger with Disney. The founder of both these companies, Steve Jobs is now routinely voted one of the world's most important business leaders, after having been called a one-time fluke for years.

Now that we have followed together the most important events in Steve's life — especially his career of course — it is time to step back and try and look at the big picture.

I am going to get personal here: it is hard for me to put into words how much admiration and huge respect I have for Steve Jobs, and how much inspiration I draw from him. Let's face it, business history has seen many another genius entrepreneur, inspirational leader, or industry visionary. But among them, who has had as big an impact as Steve Jobs on the rest of humanity? Who has faced greater glory and worse shames, all in one life? Here we are talking about a man who has dedicated his life to giving the power of technology to the masses. He has democratized computers with the Apple II. He has made them human and even friendly with Macintosh. He has almost single-handedly made possible the desktop publishing revolution. Here is a man whose company, Apple, is so innovative its products inspire the whole high-tech world, whose corporate culture is so powerful, it has millions of fans worldwide whose following is akin to that of a cult. Here is a man who has changed the way we all listen to music with iPod, who has shaken the music business with iTunes and the phone business with iPhone. Here is a man without whom 3D animation might have never taken off, or certainly would not have taken off the way it did

thanks to Pixar. Here is a man who has made millions of lives so much easier by making technology seamless, intuitive, exciting and beautiful, instead of complicated, arcane, dull and ugly.

The question remains open to me: which business figure can claim so many achievements? Whose influence has been greater? That's why I struggled for so long to find appropriate words to summarize the essence of Steve Jobs, a genius, but also a man, an icon with flaws, full of paradoxes, a visionary who has sometimes proven dead wrong. I thought hard — until I realized Steve himself had found these words. So let me conclude with the voice from Apple's *Think Different* commercial:

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things. They push the human race forward. And while some may see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do.

**This biography was last updated in November 2010,
and will not be updated anymore.**

For current news on Steve Jobs, please [check out our blog](#)