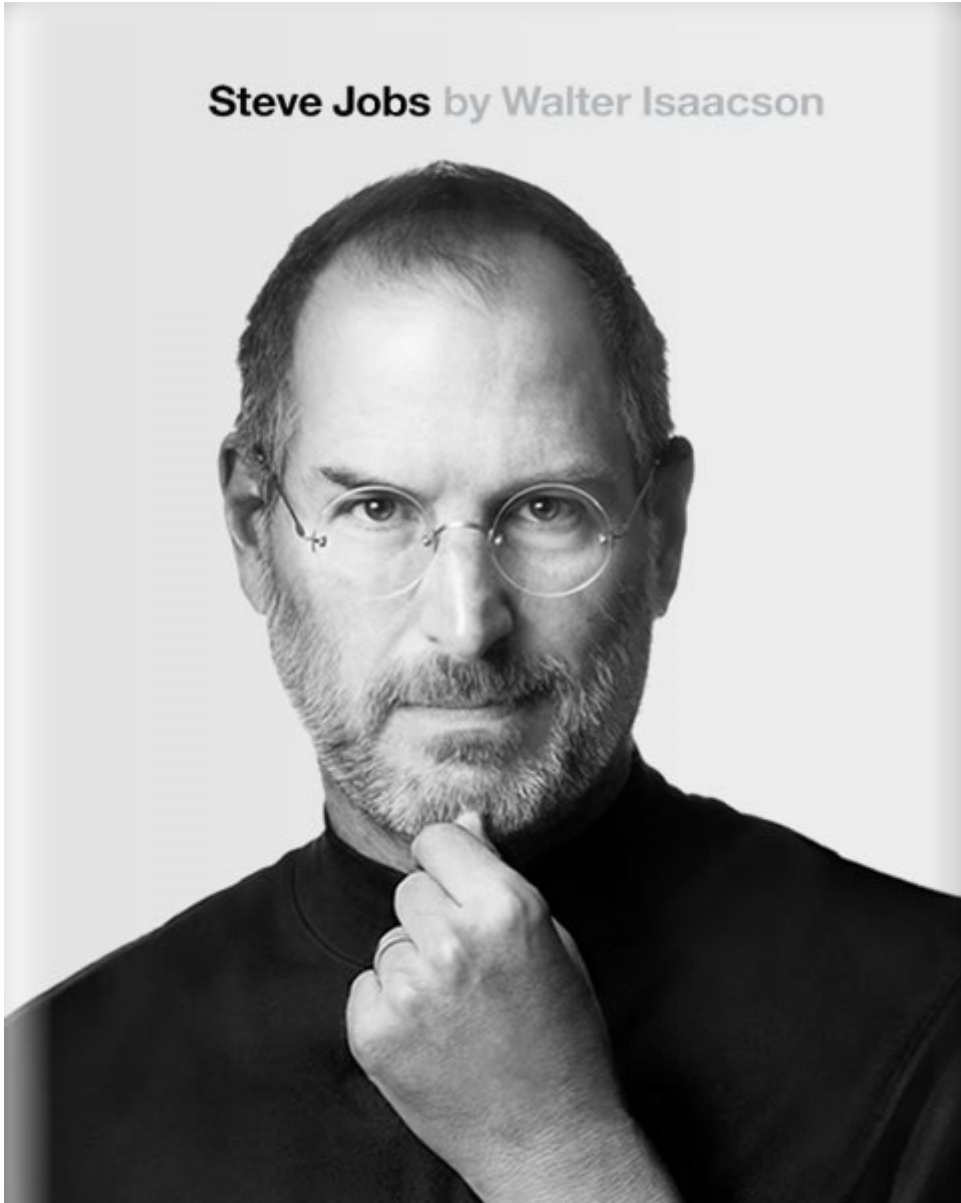


Steve Jobs by Walter Isaacson



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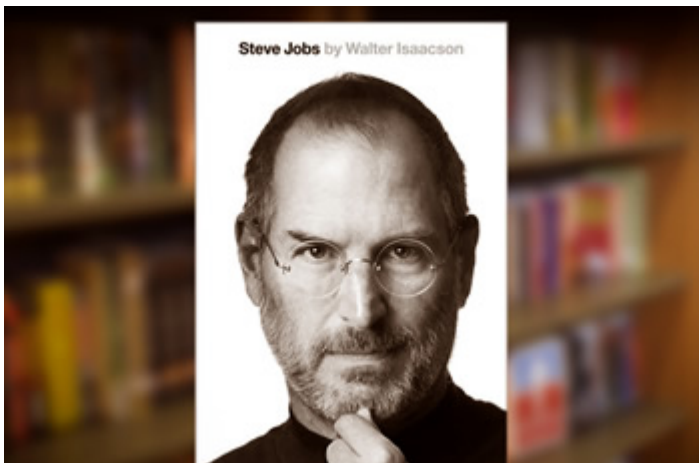
The Book

Steve Jobs is the authorized biography of Steve Jobs. The biography was written at the request of Jobs by acclaimed biographer Walter Isaacson, a former executive at CNN and Time who has written best-selling biographies about Benjamin Franklin and Albert Einstein.

Based on more than forty interviews with Jobs conducted over two years - in addition to interviews with more than one hundred family members, friends, adversaries, competitors, and colleagues - Isaacson was given "exclusive and unprecedented" access to Jobs's life. Jobs is said to have encouraged the people interviewed to speak honestly.

The book is described as "[chronicling] the roller-coaster life and searingly intense personality of a creative entrepreneur whose passion for perfection and ferocious drive revolutionized six industries: personal computers, animated movies, music, phones, tablet computing, and digital publishing."

In just over 600 pages, the book covers Jobs' entire life, from his childhood in his adoptive parents' home in California to his three bouts with pancreatic cancer. Early chapters include one on his relationship with Steve Wozniak and Jobs' brief stint at Hewlett-Packard, Reed College, Atari, and a formative trip to India to find himself. A chapter each is devoted to the development of the Apple I, Apple II, Lisa, and the classic Macintosh during his early years, the founding of NeXT and funding of Pixar when he was ousted from Apple, and Jobs' triumphant and incredibly productive return to Apple starting in 1997. Following the latter "second coming" of Jobs, Isaacson chronicles the development



of the iMac, iPod, iTunes, Apple Stores, and iPad.

Jobs' abrasive personality, which simultaneously inspired and intimidated those around him, is a recurrent theme throughout. Details of his personal life are also included, including early relationships, his marriage of twenty years, and his four children and his early life.

Youth

The jobs family

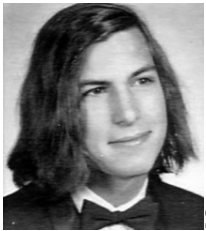
Steve Jobs was born on February 24, 1955, in the city of San Francisco. His biological mother was an unwed graduate student named Joanne Simpson, and his biological father was either a political science or mathematics professor, a native Syrian named Abdulfattah John Jandali.

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 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.

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.

Homestead High

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.



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

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”.

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

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.

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.

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.

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 and 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.

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.

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 fulfil 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.

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.

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.

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.

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.

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.

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 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.

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.

Getting real

Hopes at NeXT

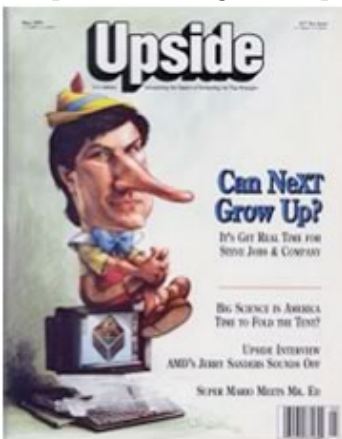
There were a couple of events that led NeXT executives to falsely believe that they were on the right track, instead of realizing they were heading to the wall.

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 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.

Tough times for Pixar

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

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.

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