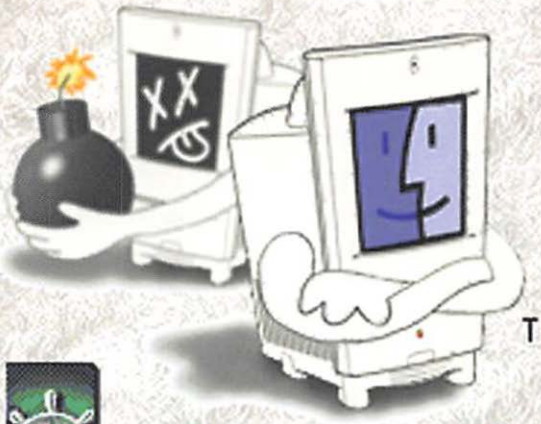
Design Classics

Bernhard E. Bürdek

The Apple Macintosh

Verlag form

Many objects are beautiful; many are useful. But only very few ever enter into history: Design Classics



Cult of Macintosh

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will happen. With this in mind, Apple continues to be a catalyst for improving the way people use technology to work, learn, and communicate."

And if something turns into a cult-object, then naturally the appropriate environment develops: diverse magazines are dedicated exclusively to the Mac, its accessories, and software. Independent fairs are held (the *MacWorld*) and the product itself has its counterpart in Cyberspace: http://cult-of-mac.utu.fi/ – that's the URL (the Internet address) where fans can download information to their own computer from a rich and comprehensive Mac-archive. About two hundred addresses exist, offering information of all kinds about APPLE and the Mac.

The Mac, its software and different accessories have their own trade fair, *MacWorld*. On the Internet, the community of Mac fans can surf through the Mac's archives.

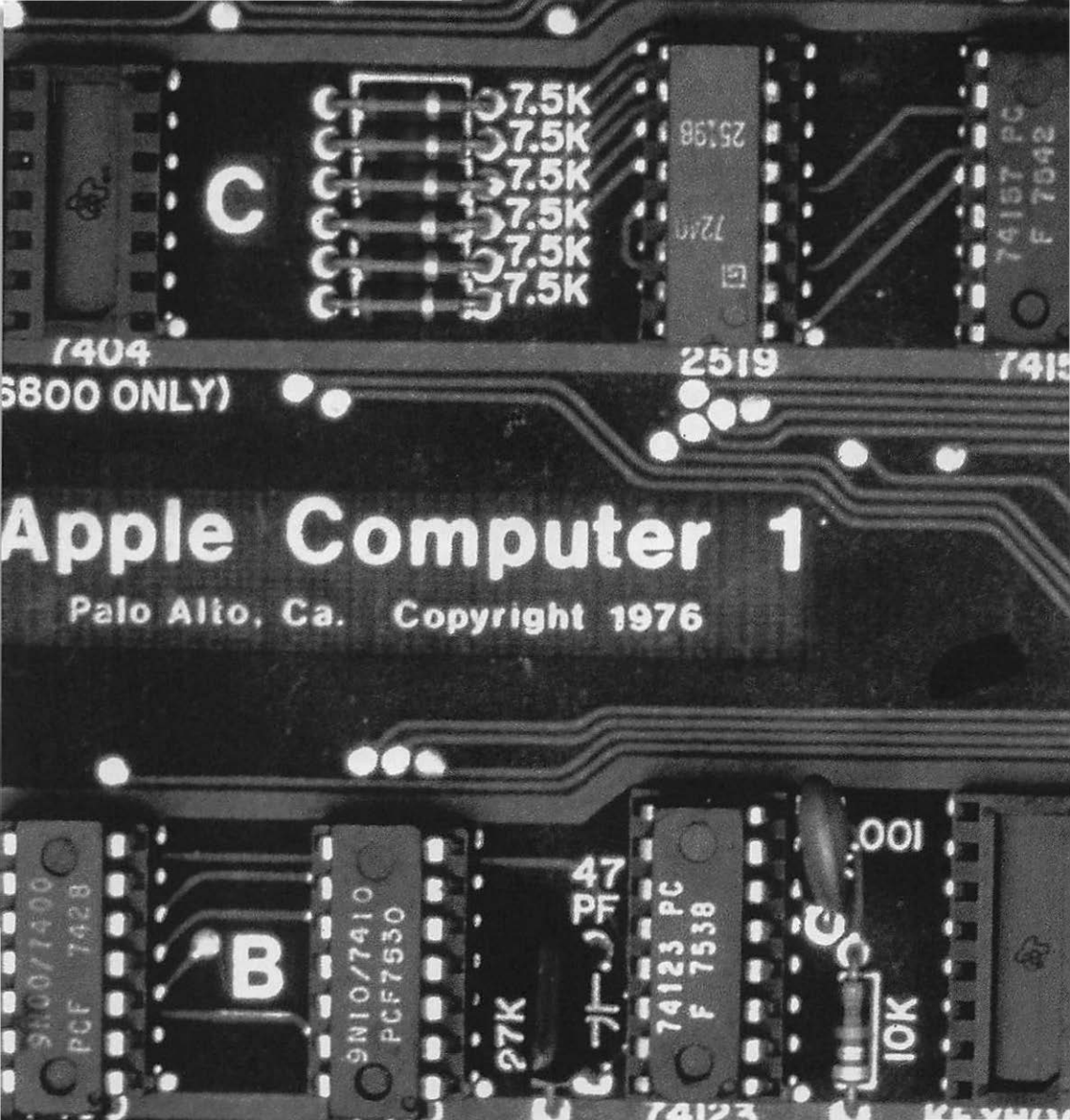
No matter how light-heartedly one may speak of a "change in paradigm" in history, the Mac certainly caused such a transformation – from the rule of computer scientists to the use of computers by amateurs. This was a truly revolutionary act: the democratization of the electronic data processing by the turn of the 20th century.

There is something else: similar to the Walkman[9], which made the collective musical experience mobile and individual, the Mac is the symbol for how computer performance that had for the most part been centralized, was now decentralized and thus made available on the individual user's desk.

ware and software. The mutual escalation – ever-increasing performance and more and more "features" – of course necessitate the appropriate RAM expansion, larger hard drives, etc. The Mac-community was challenged quite a bit: which application runs on which program? New updates and upgrades, ever newer boards and processors – whoever wanted to keep up had to dig deep into their pockets. A comparison: in 1985, the RAM expansion of the Mac from 512 K to 1024 K (i.e. by 0,5 MB) cost DM 3,780. Today, the SIMMs are dealt for daily prices almost like crude oil on the Rotterdam "spot market". The current "rate" for Apple is around DM 15,- per MB, which means that for the price in 1985, one could get about 250 MB today.

The inner life of a cult-computer. A chipboard from 1976.

But what was it that has made the Mac – beyond all functionality and qualities – a cult object? The answer seems to be pretty simple: hardware and software formed a unique symbiosis in a form that can't be found with any other computer company. And – something that other producers realized only rather late – the user is the central focus. In a self-promotion of the company from May 1996, one could read: "Apple strives to create products that people can use to enhance their knowledge and ability, and create and communicate in new and more intelligent ways. The company holds the philosophy that when individuals are given extraordinary tools, extraordinary things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Classic
Macintosh
Colour Classic

The original Mac was available for almost ten years in its casing designed by frogdesign: the Macintosh SE 30 (top), the Macintosh Classic II and, on the right, the Macintosh Classic with a color monitor.

– in 1987, a new generation of Macs, the SE and the Macintosh II followed
– in 1989, the first portable Mac was launched
– in 1991, the Quadra-series followed, conceived for the high-end user
– in 1993, there was the Power PC that could also process DOS-software
– in 1994 came the 6100/60, 7100/66 and 8100/80 series as well as the especially affordable Performa series.

The "original Mac", after all, was available for almost ten years and mutated via the Classic, the SE/30 up to the Classic II in its original casing form until its production was finally terminated at the end of 1993.

This is truly a long story for such a fast-lived product. The turbulent series of ever-new systems, however, has in the end contributed, perhaps fatally, to the "loss of identity" of the Mac.

Updates and Upgrades

By the middle of 1996, over 26 million Macintosh computers had been sold – the Apple-community is supposed to consist of more than ten million fans.[8] The Apple may have lost some of its bite, but the company still has a considerable market share throughout the world.

The development of the Mac also clarifies a widely unknown phenomenon – the reciprocation between hard-

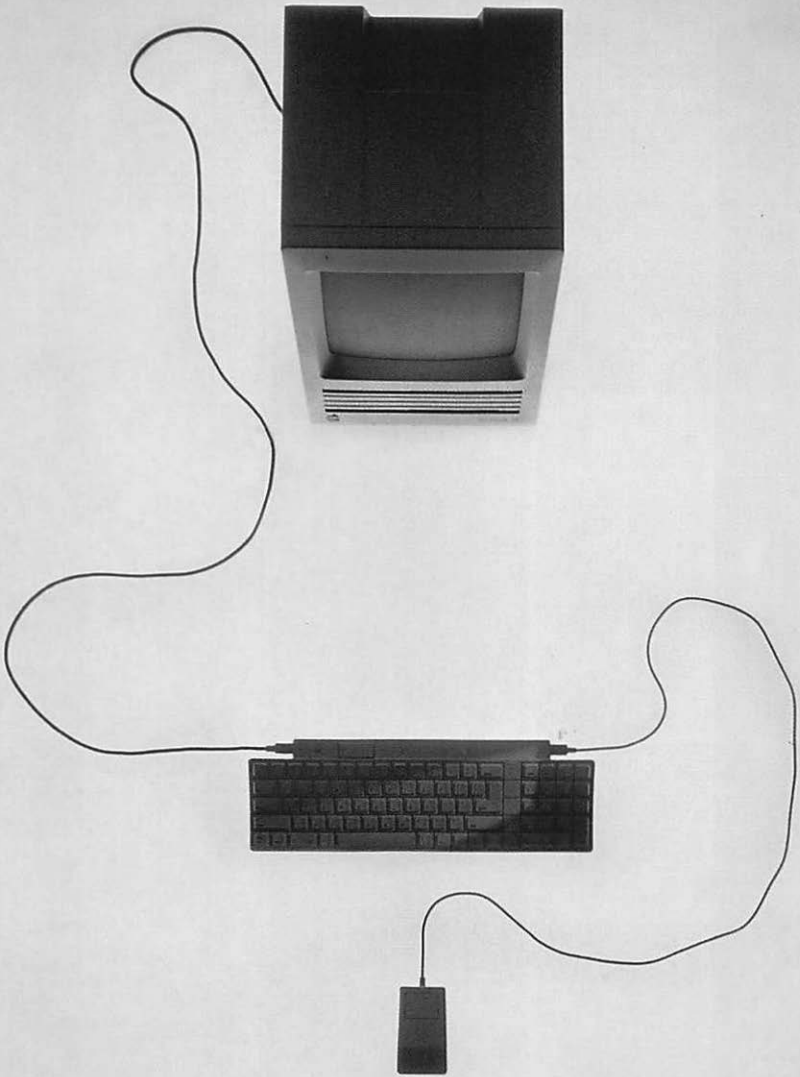
cessor and was thus predestined for graphic software operation because, at the time, it was the 8-bit systems, and IBM's 16-bit AT machines that dominated the market.

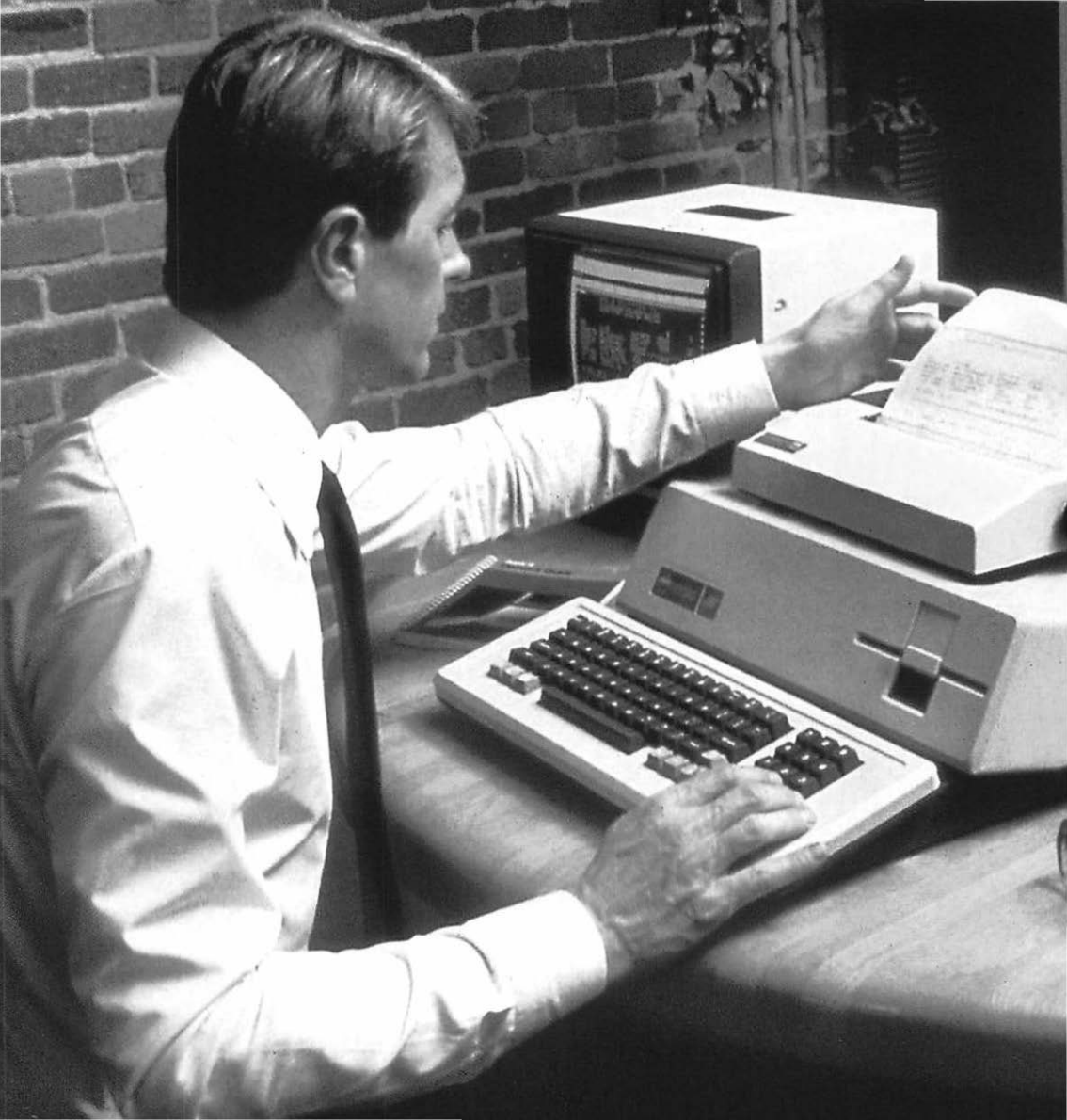
In September 1984, there was the first "update"; the Macintosh 512K was introduced. In comparison: today's regular PCs have 16 or 32 MB RAM, i.e., 16000 or 32000 K. The Mac became the standard for personal computers. The handling was still a little uncomfortable since the operating system and the user software had to be loaded with a diskette; the storage of the data had to be done on a diskette, as well. The user mutated into a kind of diskette jockey.

Hartmut Esslinger has recently made a very fitting comparison for the beginnings of the Mac: "Personal computers have raced through this continuum of expressive possibilities at the speed of conductivity. For example, the memory-limited GUI of the mid-1980's Macintosh resembles more the sand paintings of the Navajo culture or the medieval art of stitching than it does the imagistic styles of contemporary art. But today's memory-heavy interfaces, just like the cave paintings, make it quite clear that 'simple' doesn't mean 'primitive'."[7]

But with the Mac, the true success story of Apple began:
– in January of 1985, the Mac Plus (with a 20MB hard drive) and a compatible laser printer came onto the market

Upright, space-efficient and with a white casing – the Mac started Apple's success story. A new generation came onto the market in 1987 with the Mac SE (picture).





the United States by 1983. In the same year, the millionth Apple II was delivered.

Also in 1983, a product called Mac XL – or *Lisa* – appeared on the market. It cost a good $10,000 in the United States and was supposed to ring in a new generation of computers. However, *Lisa* was destined to remain the failed predecessor of the Macintosh, and I still remember my first encounter with her in a Frankfurt computer dealer's shop quite well: on a tiny monitor one could observe the cursor movements and many small icons framed the edge of the screen – the number of applications, however, were modest. In this country, one was supposed to shell out DM 21000 for the hardware alone, and then slap another DM 6000 on the table for the operating system and application software– we gladly did without it.

The Apple III (1981) already had an internal disc drive and four connectors for peripheral devices.

The Apple enabled the computer to become a household object. The era of the large computer centers came to an end.

The following double page shows other milestones of the Mac: the Apple IIa (1977) (top), the Mac XL called *Lisa* (1983) and the Logo designed by Rob Janoff in 1977.

The First Mac

Finally, in January of 1984, the time had at last come: the Macintosh was presented in a large television extravaganza. It cost $2,495, had 128K of RAM and an integrated disc drive, a 12 inch black and white monitor, a keyboard and, of course, a mouse. The software offered with it, however, was still modest: a text program called *MacWrite*, and a simple paint program called *MacPaint*, which included a pixel font and various "fill patterns", with which simple pictures could be created. Still, the Mac had a 32-bit micropro-

items, the two of them were able to produce the first 50 boards for their Apple I computer.

In April of 1976, they founded the Apple Computer Company. And in 1977, Rob Janoff, Art Director of the Regis McKenna Marketing Agency, had already designed the logo for the company – the apple with the missing bite, which seemed to be Job's favorite fruit as he used to spend his summer vacations working in apple orchards.[5] In the same year, the Apple II was brought onto the market; it was the first computer with a color monitor and a keyboard. It cost just $1,298 back then, and Jobs succeeded in exciting so many independent programmers in this new product that, within a short time, there were approximately 16, 000 applications for this computer.[6]

In 1981, the Apple III came onto the scene; it had a new operating system, an integrated disc drive and four slots for so-called peripheral appliances. It cost the proud amount of $3,495 and at the time was the most progressive computer system in the world. Apple started to build a production facility in Ireland and a customer service center in Holland; the company employed more than 1000 people. When Big Blue entered the "Personal Computer" market in 1981, Apple placed a full-page ad in New York's Wall Street Journal: "Welcome IBM. Seriously." Apple had more than 3000 dealers worldwide. And APPLE was ranked number 411 in Fortune 500's list of top companies in

The comparison with a contemporary computer is almost impossible: the Apple I from 1975.

Where it all began: a view of the legendary garage of Jobs and Wozniak in Cupertino, California.

IBM
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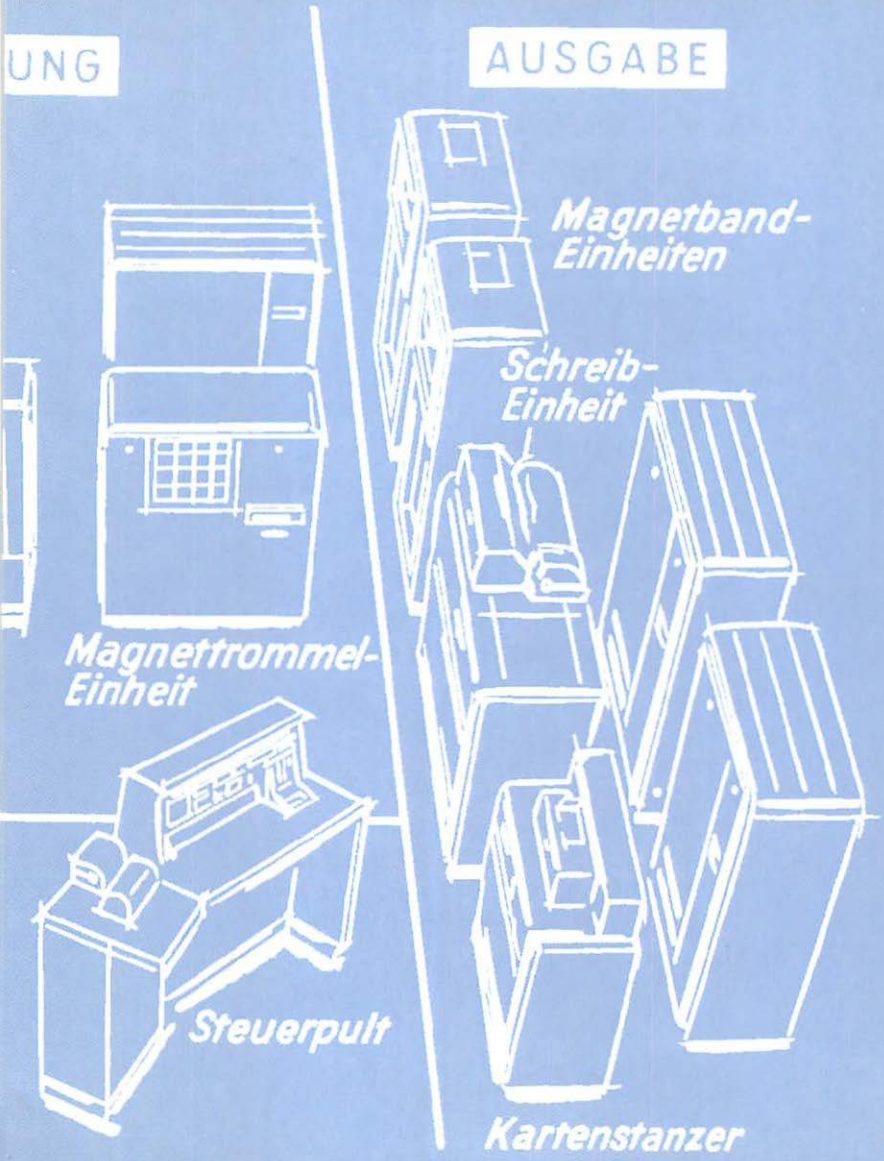
the companies and administrations. According to their training, they were engineers, mathematicians and computer scientists and therefore accustomed to dealing with abstract numbers and terms. They left their mark on the "languages of data processing" called "programming languages". For this was one of their main tasks: they had to "write" the programs, according to which the computers had to do their jobs. What seems cryptic to us was their professional and, therefore, day-to-day-jargon.

During the time of main frame computers, the operation was reserved exclusively to specialists who were the only ones capable of dealing with the numbers and cryptic terms of the computer language. In this way, they gained immense power in the enterprises.

By the end of the '70s, the Large Scale Integration (LSI) was invented, and by the beginning of the '80s, it was followed by the so-called VLSI-chip (Very Large Scale Integration). These chips were already capable of executing several million operations.[4] Thus the path was prepared for the "personal" computer. At the same time, the tradition of the large computers still dominated a large segment of the market – the Main-Frames by Big Blue, Bull, DEC and others.

Pioneers

It was during the mid-seventies that Steven Paul Jobs and Stephen G. Wozniak soldered together their first "computer board" in a garage owned by Job's parents in Cupertino, California. Convinced of its inevitable success, Wozniak sold his programmable Hewlett-Packard pocket calculator and Jobs his VW-van. With the $1,350 they received for these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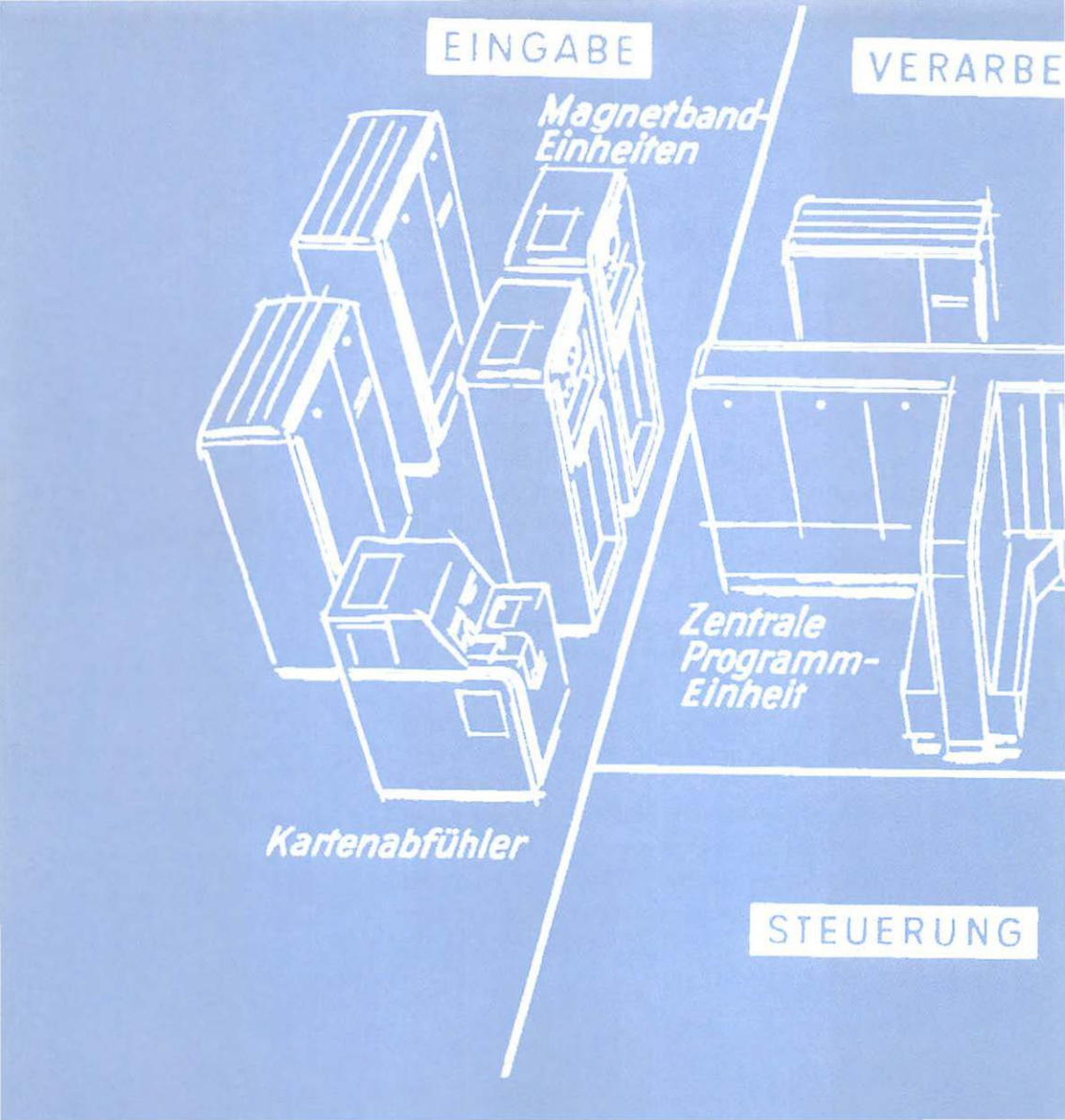
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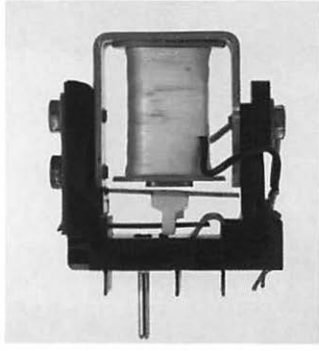
notable pioneering achievement, as there has not been another jump in technological development of that scale since then.[2]

The real digital revolution began with the invention of the transistor in 1947, because it replaced the vacuum tubes, which had a high amount of down time and required a lot of space. But only with the invention of the integrated circuit in 1958, what we call "chip technology" became possible: a concentration of many "circuits" on a small silicone chip which can be switched to 0 or 1, or "off" or "on". This is how the triumphal march of microelectronics commenced in the beginning of the '60s. I first encountered it in the so-called "Main Frames" (large computers) from IBM. They had to be fed with punch cards, which were then processed in batch-mode. At that time already there were genuinely serious attempts to use such "computers" for the design process; it was also a time when the first interactive systems were being introduced and great hopes were attached to them.[3]

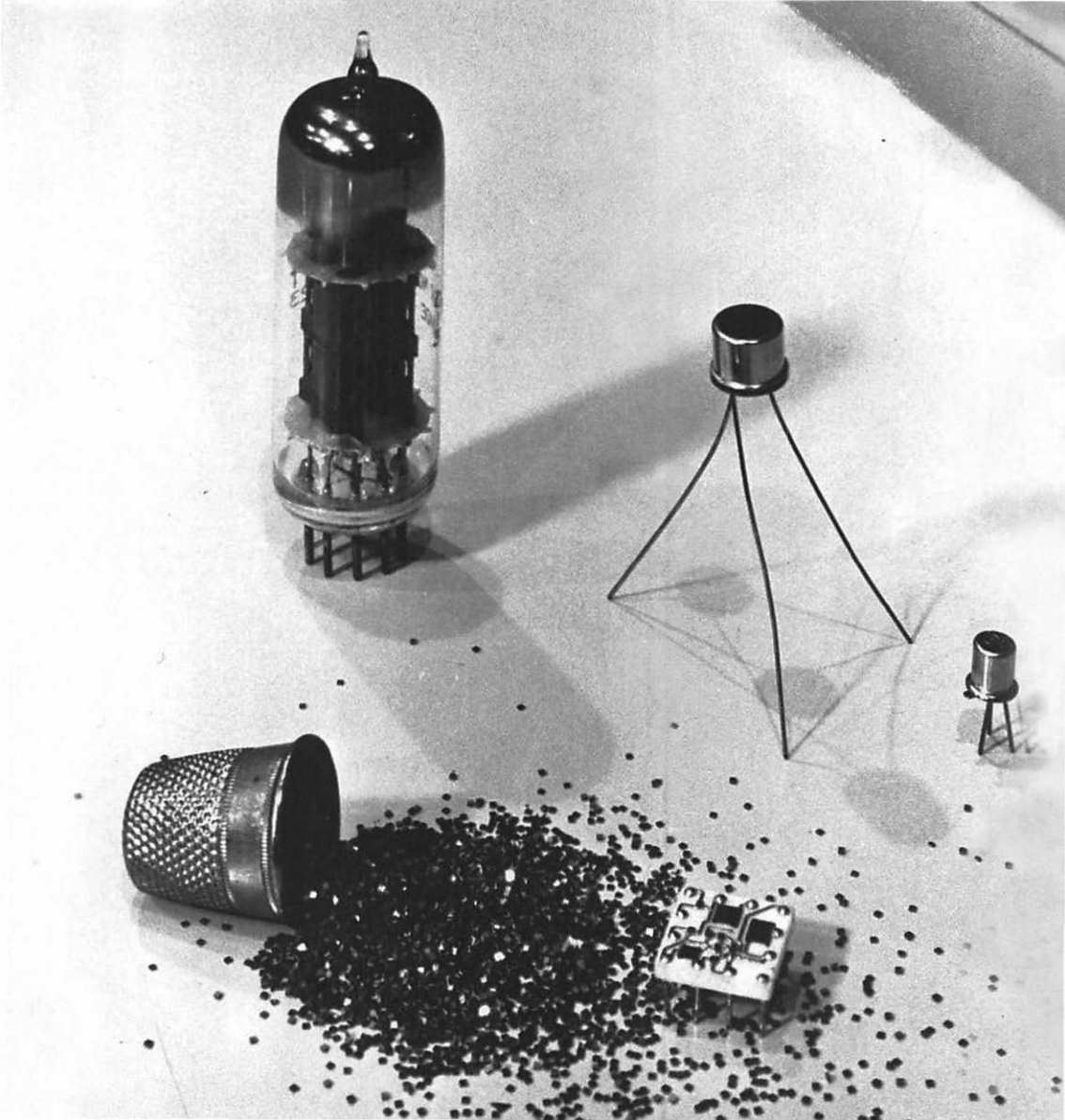
Naturally, only experts could operate those early computers. Many companies had just begun the transition from manual bookkeeping to electronic data processing. And whenever something went wrong, a scapegoat was always right there: it was the computers' fault. Those who could operate them, however, had tremendous power. The heads of the computer centers were the true rulers in

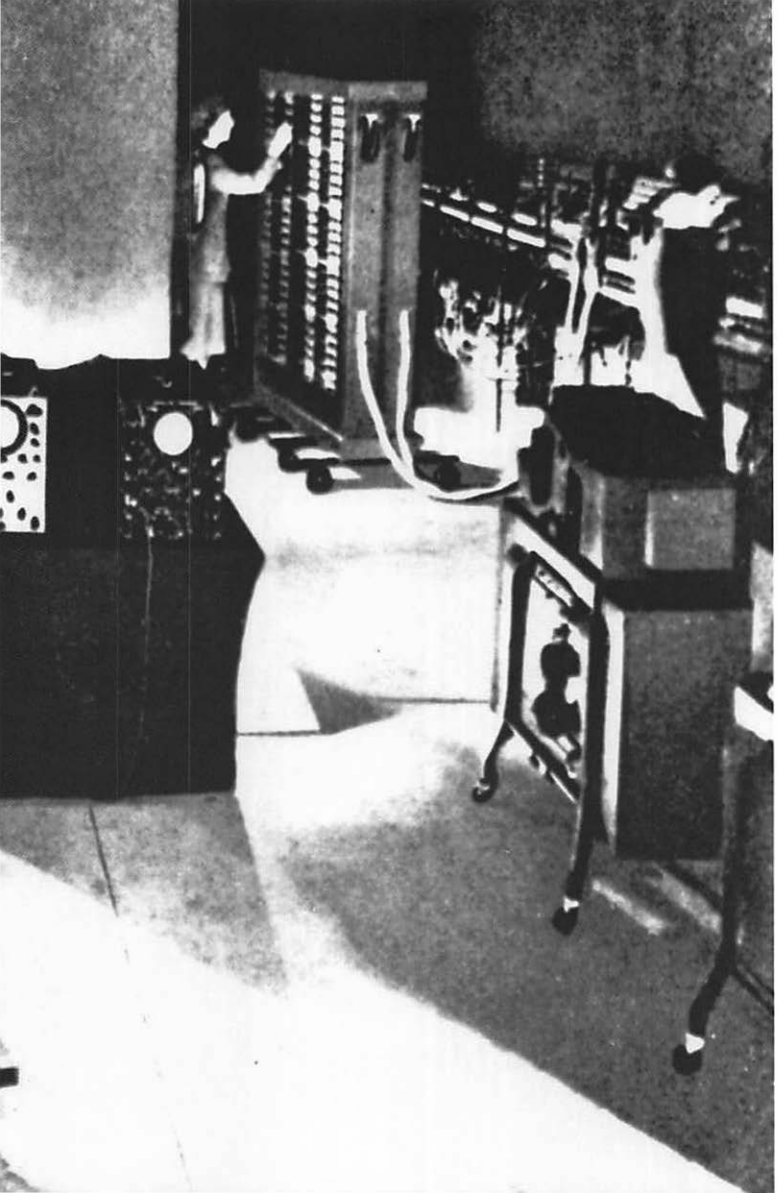


An electro-mechanic wire relay from 1936, used later on in IBM computers.

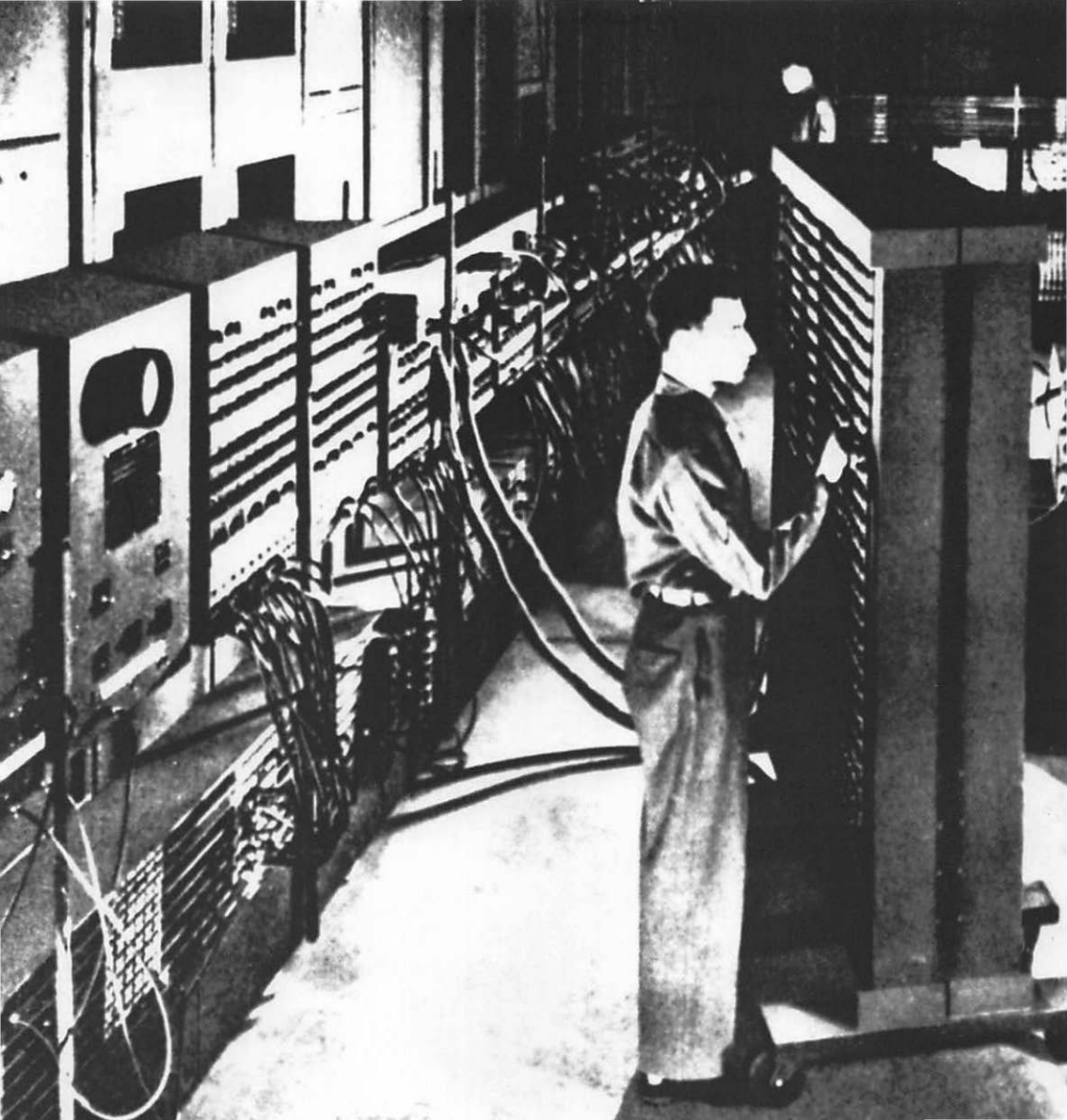
The most important components of the computer became ever smaller: tube, transistor and microchip in a comparison of size.

The following double page shows the schematic structure of a computer center with main frame computers.





It needed 140 square meters of space, had 18,000 amplifier tubes, 1500 relays and could do 5000 additions per second: ENIAC, the first electronic calculator, was developed at the University of Pennsylvania in 1946.



SCIENTIFIC AMERICAN

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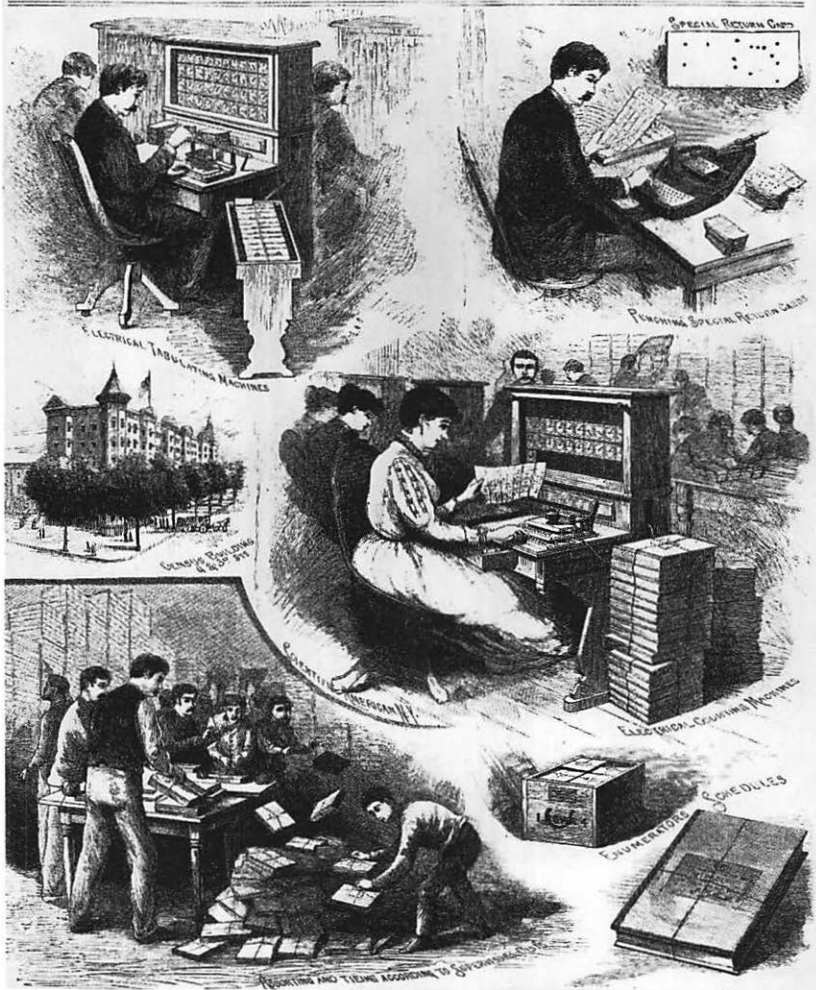
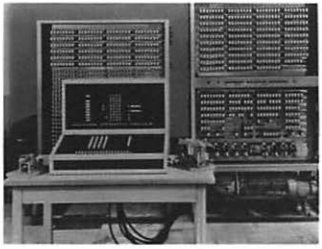


similar to how the 19th century industrialization changed the picture of the old and new world. Therefore, I once described the microprocessor or chip determining this technology as the "leading fossil of the nineties." [1]

The Mac stands as a synonym for the transition from hardware to software that characterizes design at the end of the 20th century. The product and the corresponding software programs – and in the case of the Mac, especially its intuitively tangible graphic user interface – are what have made it a classic.



The first relay computer Z3 by Konrad Zuse, introduced in 1941, is considered the ancestor of the modern computer.

Another step backwards: Hermann Hollerith invented the first machine for counting punch-cards, used in 1890 for the census in the United States. The drawing decorated the front page of *Scientific American* on August 30, 1890.

The cover page shows Steven Paul Jobs (right) and Stephen G. Wozniak.

A Short History of the Digital Revolution

In 1663, Gottfried Wilhelm Leibniz invented the binary numeric system – and is therefore considered the founding father of everything that has to do with computers today. Towards the end of the 19th century, it was the German-American, Hermann Hollerith, who invented a machine for counting punch cards, which considerably speeded up census taking back then. In 1935, Konrad Zuse started the development of program-controlled computers. His legendary Z3 calculator came into the world in 1941.

During the '40s the first computer – named ENIAC (Electronic Numerical Integrator and Calculator) – was developed at the University of Pennsylvania. It had 18,000 vacuum tubes and 1,500 relays and could do 5,000 additions and 400 multiplications per second. The ENIAC was certainly a

Very few objects become design-classics; products from the realm of microelectronics do so especially rarely. Because of the dramatic speed of technological development, new phenomena fall easily into oblivion, whereas in the past it took generations until they had disappeared from the collective memory. However, there were always verbal chronicles of events – and later on, written records – that had the purpose of handing down to future generations how things were and how everything happened earlier.

The short-lived nature of electronic data processing equipment, however, is different, and we are confronted here with a special situation. This technology has changed the 20th century to such a dramatic extent – and will certainly influence a good part of the 21st century – in a way

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The Apple Macintosh

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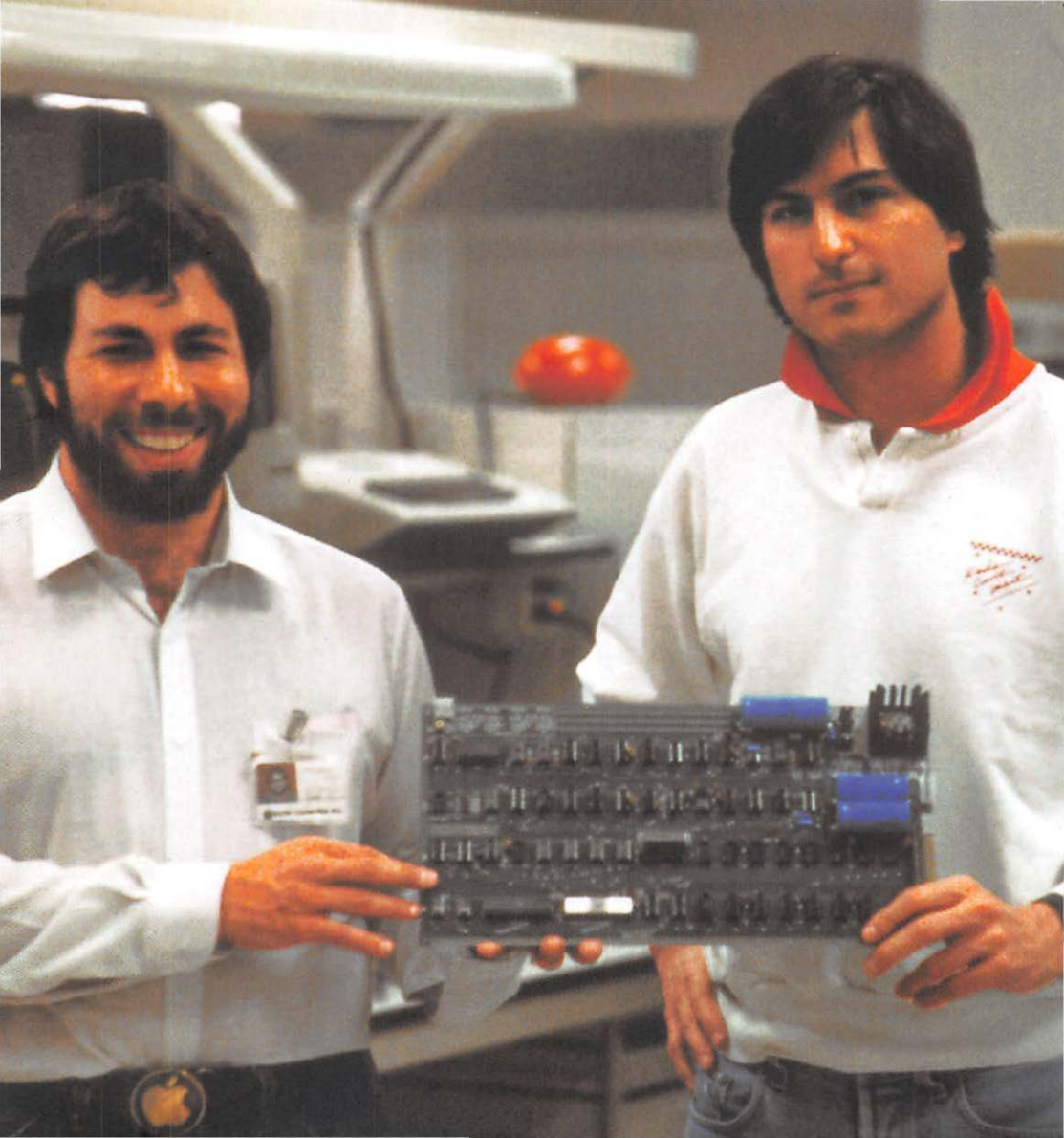
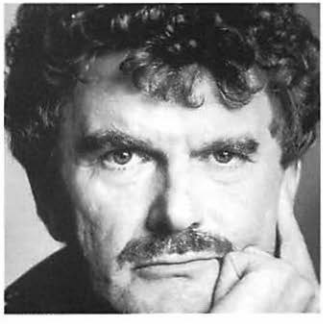


The Hardware

Part of the history of the Mac, naturally, is the story of Hartmut Esslinger and frogdesign. When Esslinger came to California in the beginning of the '80s and met Steven P. Jobs, frogdesign was on its way to becoming a "global design player": with Sony, the gates to Asia were opened, and with Apple the gates to the United States.

The computer design of those days was characterized by anonymous boxes, which made the importance given to them by the developers (technicians) very clear: calculating slaves designed to increase the productivity of companies. Steven P. Jobs, who was very impressed with the European product culture, couldn't and wouldn't live with this concept. Thus, he invited eight mainly European design studios for a competition – the "Esslinger design" won it by quite a large margin.[10]

On December 14, 1982, a meeting was held at Apple in Cupertino, during which Steven P. Jobs placed an Apple II computer board, a keyboard and a drive on the conference table and said: "This will be our next computer – isn't it a great idea?"[11] Hartmut Esslinger must have been enthusiastic too, because the Apple IIc designed by him and frogdesign represented a remarkable breakthrough in computer design. More than 400,000 units of the model were sold.



Hartmut Esslinger, the designer of the Apple IIc. The breakthrough succeeded with the computers designed by him and frogdesign from 1982 onward.

The Apple Macintosh SE designed by frogdesign, clearly distinguishes itself from the devices of other computer manufacturers.

A contract for an annual fee of 2 million dollars and the offer by an American model maker to work for frogdesign laid the foundation for the Campbell office, situated at the southern edge of the legendary Silicon Valley. And for Hartmut Esslinger, the Californian dream became a reality. He summarized his design philosophy in a few words: "Design has to create industrial culture and accept the people."[12]

Steven P. Jobs strove for differentiation in the design as well: he believed that the white APPLE computers should challenge the stout and commonplace appearance of the IBM computers (especially their grayish-beige box design). This, however, had its disadvantages in the rough and tumble existence in every-day-life: the light monitor frame quickly turned into a "mourning" frame if treated wrong.

Steven Holt – in those days the editor-in-chief of the magazine for international design, ID, euphorically wrote: "With its small footprint, high-resolution graphics and simple design, it spells out the future direction for Apple: accessibility and portability. More interesting, the complete package including box, instruction manual and supporting material is one of the best total product grouping to arrive in years."[13] It was only logical that in 1985, in its Annual Design Review (by the way, a truly international barometer for all areas of design), *ID* magazine awarded the APPLE Corporate Identity Guidelines, the Identity Program, the

The original Mac by frogdesign with its snow-white casing consciously was challenging the gray-beige „box-design" of the IBM-computers.

For comparison: an IBM PC used in the Mais bakery in Dehrn near Limburg, 1985 (right).

Annual Report and the University Consortium Program for its high design quality.[14]

To stand opposed to the "mainstream", to visualize the dynamics of his company, to recognize the European tradition of industrial design and use it for a U.S. enterprise – this is certainly the merit of Steven P. Jobs.

Andreas Haug, a partner of Hartmut Esslinger at frogdesign during those days and, since 1987, one of the two heads of the renowned office, Phoenix Design, in Stuttgart, remembers: Steven P. Jobs had the courage to take a big risk and demand an extremely high measure of quality for his products. "Made in Germany" played an almost legendary role for him – definitely a rather unusual attitude for an American at that time.

The anniversary-Mac: for their 20th anniversary, Apple presented a graceful, softly rounded device covered with leather, uniting TV, radio and computer in one.

The Mac itself became the guiding design model. It came along in an upright stance, was space-efficient and turned towards the user. It easily fit into the environment of those who were sensible towards design and were engaged in cultural work processes: architects, designers, graphic designers and marketing people. The Mac seemed perfect for them.

When you turned it on, a friendly face smiled happily at you, you were greeted "personally". What a difference compared to the anonymous, sober DOS-prompt: C:\>! And then there is the Mac's reassuring "beep" – in the

beginning, a simple monotone chimed as a greeting, but with the rapid increased in computing capacity, this tone was refined, too: if you turn on the Mac today, an almost orchestra-like chord greets you. And by the way, the sort of too-small monitor always had something playful, something "child-like", about it. Certainly, the Mac was supposed to be "childishly simple"; but would something like that really be able to "grow up"?

The hardware is only one aspect of the success of the Mac. With the graphic user interface, Apple established a standard that remains valid to this day.

The Software

In the beginning of the '70s, Rank Xerox Cooperation (a producer of photocopying machines) founded a research laboratory in Silicon Valley, called PARC (Palo Alto Research Center). The ideas of operating a computer by means of graphic symbols (icons) and a "mouse" resulted from the pure research done there. But it was only in 1981 that a computer with the first "graphic interface" developed for use in the office – the 8010 Star Information System – was introduced. This was the beginning of today's wide- spread GUIs (Graphical User Interfaces). More than 30 programmers worked on the development of the interface. It was "designed" even before the functionality of the device itself was certain, and long before the hardware was built.[15] The "desk-top-metaphor" used here for the first time of course made a lot of sense, because the interface was to represent the office environment in a way that is familiar to the users.

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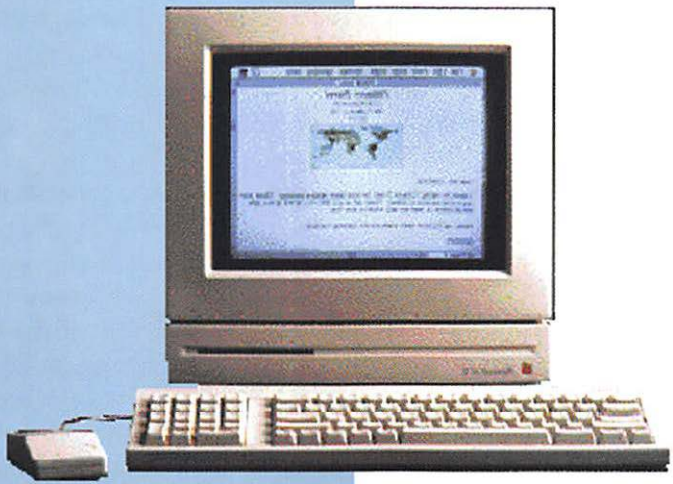
Der Apple Macintosh



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The authors and developers themselves uttered the opinion: "User-interface design is still an art, not a science", and at the end of their article from 1982 they expressed their hope: "Perhaps by the end of the decade, user-interface design will be a more rigorous process. We hope that we have contributed to that progress."[16]

They have indeed, although in a way completely different from what they had first imagined. Xerox, however, did not have the entrepreneurial courage to occupy this new area of business. And thus, it is told that Steven P. Jobs had paid an official visit to PARC in November 1979 and taken the idea home to provide his computers with this feature.[17] Given the lively fluctuation in Silicon Valley, it just happened that some developers changed to Apple, and with that the success story of the GUIs, the Graphical User Interfaces began.

The Mac's interface became a model: to understand something "on the fly" was realized in the Mac in a consequential way for the first time. To glide across the screen with the mouse, klicking on objects and seeing how things change, was a tremendous step that went way beyond the input of commands. Anyway, for more complex applications, one has to intensely know about the system even in the case of the Mac. On the "surface" it is easy to use, but the user hardly has any "system knowledge". In this way, the Mac also conforms ideally to the transition described by

me: from the "linguistic turn" (the power of the word) to the "visual turn" (the power of the image).[18]

From word to image was also the main theme for the Mac from an entirely different perspective. After "word processing" had long become an important area of use of the PCs, a new program was put on the market in 1985, opening up many new possibilities: the Pagemaker. It is a layout program for placing text, graphics and images on a page that needs to be printed. Apple brought out the first laser printer for the Mac; the in-house printing shop became a reality, and the end of Gutenberg's printing art was to be feared. Let's remind ourselves that during this time, pure drawings or paste-up layouts were still being made, then films were taken from them with a repro-camera. This was the preliminary stage for printing. Today, a disc taken directly out of the Mac is given to the film lab.

Now it was possible for amateurs to "design". The rich range of fonts available on the Mac and the lack in experience or sensibility with their use, however, led to a design pandemonium of the worst kind. This form of "democratization" was probably one of the most negative consequences of the personal computer and it would take several years before graphic designers seriously made an effort to learn new qualities. By the end of the '80s, a new era of graphic design broke out which utilized the full

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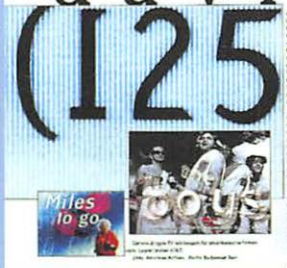
david SUN

„Auch ich konnte schöne Broschüren so gestalten, daß man sie gut lesen kann. Das Leben ist aber zu kurz, um so langweilige Dinge zu tun"



» Sie hat ja eine wunderbare Leber! «

ZU ARM ZUM TRINKEN IST DER OESTERREICHISCHE WOERTERKLAUBER, MUNDARTDICHTER, SPRACHARTIST HANS CARL ARTMANN LANGE JAHRE GEWESEN. AM 12. JUNI WIRD ER 75. MEHR VERDIENT ER MIT SEINEN EINZIGARTIGEN TEXTEN, ABER IMMER NOCH NICHT, UND SELBST DAS WENIGE WIRD IHM VOM RECHTSAUSSEN JOERG HAIDER NICHT GEGOENNT. EIN GESPRAECH UEBER BRAUOURTRINKEN, ANMUT UND ANARCHIE

ZEITMAGAZIN

potential and possibilities of computer-supported design in a new way. April Greiman, Neville Brody, Erik Spiekermann or David Carson. Thus the Mac became synonymous as a medium for new flights of fancy in the world of design. The simple operation of electronic devices, the handling of hardware and software, the navigation with CD-ROMs or in Cyberspace - these aspects have become the central theme for the design of the '90s.[19] It was inevitable that one of the most famous experts in this field, Donald A. Norman, whose book became a true design classic,[20] joined the Apple corporation in November 1992 as a so-called "fellow" and chucked in his university career.

The question of whether working with graphic user interfaces could damage intelligence was once seriously raised at the University of Delaware.[21] It's certainly correct that the capabilities for abstraction diminish in a user who constantly deals with so-called GUIs – and by the way, this may be one reason that some computer users shouldn't be ashamed of their DOS-knowledge, and perhaps should remain Mac-abstinent to avoid suffering any permanent damage. The following example does have a very natural logic:

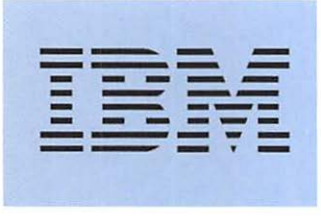
```
C:\WORD>copy form-156.txt a:
Overwrite A:FORM-156.TXT (Yes/No/All)?
1 File(s) copied
```

Therefore, Umberto Eco is absolutely right by saying that the differentiation of the systems can also be made from

By the end of the '80s, graphic designers like David Carson (left) started using the new possibilities of computer-supported design for typographic flights. Carson designed a *Zeit-Magazin* and Apple showed its gratitude with a full-page advertisement.

the perspective of religion: "It is a fact that the world splits apart - into Macintosh-users and users of the compatible operating system MS-DOS. I am deeply convinced that Macintosh is Catholic and MS-Dos Protestant. More precisely: Macintosh is the Catholic counter-reformer and suffers under the Jesuit education rule 'Ratio studiorum'. It is cheerful, conciliatory and tells its believers what to do... It is catechist, the being of the revelation dissolves into understandable formulas and glorious icons. Everyone has a right to salvation.

MS-DOS, on the other hand, is Protestant, almost Calvinist. It intends a free interpretation of the scriptures, it demands personal and torturing decisions, it forces one into a sensible interpretation and presumes that salvation is not within everyone's reach."[22]



The IBM-logo by Paul Rand and Apple's birthday greetings to Microsoft – an allusion to the cryptic interface of MS-DOS computers.

Upon close examination, one can find some remarkable breaks, after all. The "European" hardware design by frogdesign competes with an American metaphorical language. Some of the pictograms are taken from the cultural context of middle-American small towns – and was never changed: the hissing steam locomotive, the antique phone and the idyllic small houses on the prairie. The great American dream of a highest possible iconicity – understandable and truthful, in the sense of a deceivingly similar and seemingly "real" copy of the reproduced reality – always remained dominant here, as well.[23]

C:\ONGRTLNS.W95

Something entirely different was also promoted through the Mac: the replacement of linearity through hypertext. Bill Atkinson's invention *HyperCard* has been added to the Macintosh computers at no charge since 1987.[24] It is a simple author's system for organizing information with which linked texts, data bases, even simulations, etc., can be created. By the way, this was also Apple's entry into the today booming Multi-Media euphoria. Simple applications could be "programmed" with the help of *HyperCard*. The Mac, well-established in the graphics field at that point, introduced very early on the most innovative platform, which was followed only much later by Multi-Media tools such as *SuperCard*, *Director* or *Media-Tool*.

Some pictograms from Apple's HyperCard-program still point to the ancient American origins: the hissing steam locomotive, the old telephone, and the idyllic small house.

However, the concentration on the "visual" applications – at least in Europe – lead to problems, as well. Whereas the Mac was propagated in the United States as a "computer for everyone" – which, by the way, had its effect on pricing policy – it remained reserved for experts in Europe. The almost libidinous relationship of many users with their Mac also always allowed for a pricing policy that was quite a bit higher than the "industry's standard". However, it had a difficult time getting into companies, not at least due to the incompatibility of the operating system and software with the DOS or Windows-world. I remember very well an Interface presentation for a large corporation that we executed on the Mac. For

the desired, more intensive involvement of the software-developers with our concept, they first had to rent a Mac – things like that could almost lead to the failure of design projects. The division between Mac and Windows is no longer as deep as it once was; however, many differences remain, and these differences are especially important when it comes to design.

The Future of the Mac

How are things possibly going to continue with the Mac?

The cult magazine of the virtual community – the US-magazine *Wired* – recently took a poll among experts about the future of the PC.[25] Asked about the end of the Apple computer, the answers lead to good expectations: four of six people, among them Nicholas Negroponte, the boss of Media Lab in Boston, think that this is unlikely; only one of them gives the year 2000 as a prognosis. What seems to be more important in this poll, in my opinion, is how the future of the computer might look at all. For example, all experts are certain that it still can and must get smaller.

Small, round and designed especially for school-kids by Apple and frogdesign: the Emate from 1996.

However, probably the most exciting question that was asked was: when will the computer be linked directly with the human brain? The date mentioned in the answers was between the years 2015 and 2300 – enough time for Apple then, to have an active part in this, as well. The Mac in the head – this would probably be a dream for many; and it will hopefully remain just that.

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Ever smaller and more powerful: the Newton Message Pad 2000 by Apple premiered in November 1996.

The following page shows an advertisement classic for a design classic. The motif was designed during the '80s by the Hamburg BBDO Agency.

(Many thanks to Jochen Gros and Tsunemitsu Tanaka, both living in Frankfurt/Main, who used the Mac from its very beginnings, for some helpful hints.)

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p 47: Team/BBDO, Hamburg.

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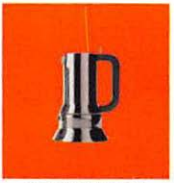

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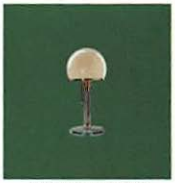

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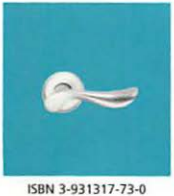

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On December 14, 1982, Steven P. Jobs placed a simple keyboard and hard drive onto the conference table: "This is going to be our next computer! Isn't it a great idea?" Like no other device, the Apple Macintosh marks the beginning of the digital in everyday life.

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