

80 YEARS: FROM CALCULATOR TO SUPERCOMPUTER

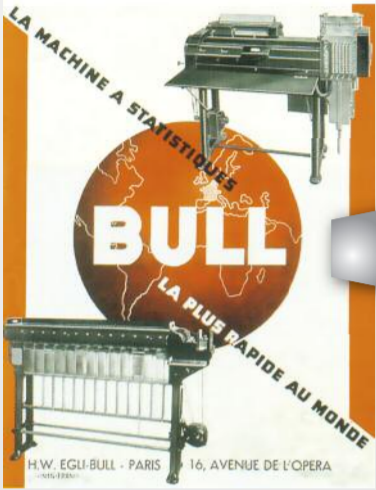
Expertise for innovation

1919



FR BULL, THE INVENTOR

Passionate about technology and keen to improve the efficiency of his business, Norwegian insurance company Storebrand, **Fredrik Rosing Bull** sets out to build a punch-card machine that performs the combined functions of counting, addition and sorting. **A pioneer of the European IT industry**, FR Bull dies, prematurely, in 1925, having designed, developed and successfully marketed his first machines.



1931

INNOVATION AND EXPANSION

Bull is constantly innovating. When, in 1938 it develops the technique of independent cycles, its **electromechanical calculators become well established**, especially in banks. Bull machines enable thousands of data items recorded on punch cards to be read, sorted, used in accounting and printed: indeed these cards will be in use right through until the early 1980s. The need to enter data onto the cards spawns a whole new job: keypunch operator. In 1960, Bull introduces rest breaks with gymnastic exercises at its keypunch pools; a practice that will spread to Japan.

A COMPANY IS BORN

In 1931, in Paris, the company HW Egli-Bull is founded, with Swiss and Belgian capital (renamed Compagnie des Machines Bull in 1932), which takes on and expands FR Bull's patents. As the only French designer and manufacturer of statistical machines, the company is already strategically important. Its new tabulator, first marketed in autumn 1931, is 30% cheaper than its American rivals and capable of printing 120 lines a minute; **making it the world's fastest statistical machine.**



1940

THE DAWN OF THE ELECTRONIC ERA

Anticipating the coming revolution, Bull hires many engineers who bring new skills and methods into the company. In 1951 Bull unveils Gamma 3, its **first electronic computer**; its performance heralds the decline of the mechanical system and the birth of the computer age. The computer is programmed with a simple sequence of operations, wired manually using tiny electrical plugs inserted into numbered sockets. **Already well established in the business world, Bull invests in scientific computing**, with its Gamma 3 B featuring a 'magnetic drum'.

1951



1957



THE DATA CENTER IS BORN

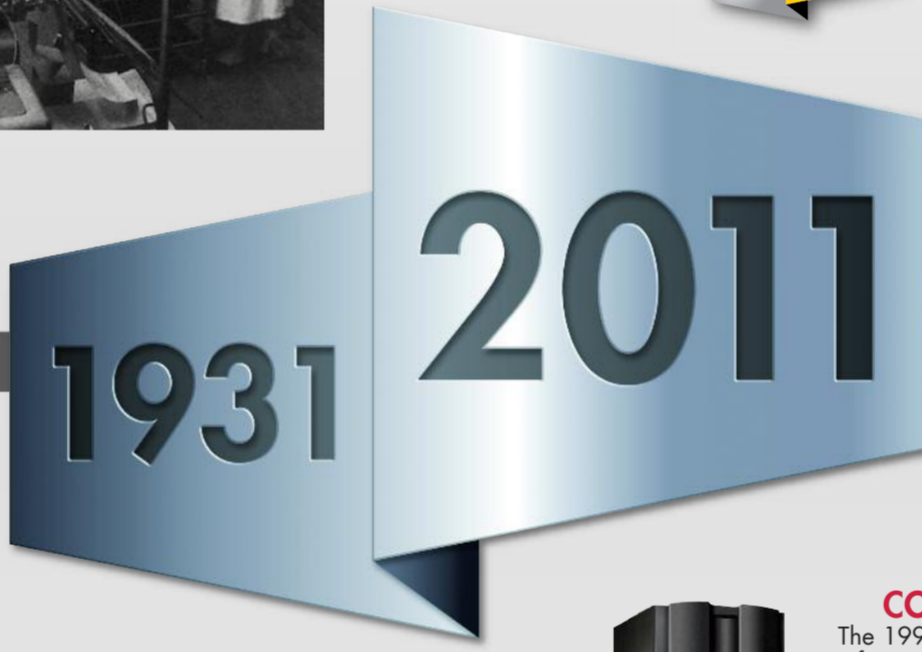
Designed in Bull's labs from 1957 onwards, the **Gamma 60 is the world's first multi-tasking computer**. Its architecture, based around specialized processors, is **ten years ahead of its time** and its development requires the design of an embryonic operating system. It marks the emergence of the world of IT specialists, with their large air-conditioned computer rooms and new job roles. And it foreshadows the large systems that will gradually become the norm over the next thirty years. Forerunner of today's data center, it is the ancestor of the GCOS mainframes, the bullion servers and bullx supercomputers. Around fifteen Gamma 60s will be sold to prestigious customers including **CEA, EDF, Mitsubishi and SNCF**. At the same time, Bull is successfully marketing Gamma 10 and Gamma 30.

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THE AMERICAN ALLIANCE

Thanks to its technological leadership, Bull's enjoys spectacular growth, especially internationally where the company generates 60% of its revenues. But this development requires significant investment, and the company becomes part of the General Electric group, which sells it six years later to Honeywell. From now on, Bull's history is being written on both sides of the Atlantic. In July 1969, two Bull-GE computers are used to control the vital organs of **Saturn V, which carries the astronauts of Apollo XI to the Moon**. In France, the launch of the Plan Calcul (the Computing Plan) in 1966 raises awareness of the **issue of sovereignty in IT**, leading to the creation of CII (Compagnie Internationale pour l'Informatique, the International Company for IT). In 1976 the two companies merge to create CII-Honeywell-Bull.



1973

THE WORLD'S FIRST MICROCOMPUTER

In 1973 R2E, soon to be bought out by Bull, designs the **world's first microcomputer**; the Micral-N. Sold for just 8,500 francs (around \$1,300) – a laughable price compared with the cost of large-scale systems – it **already features the key characteristics of today's PCs** and heralds the arrival of computers in small businesses and homes. Later, Bull Micral becomes a full range of microcomputers designed for business and consumer use.



COMPUTING AT THE HEART OF BUSINESS

The 1990s sees client-server architecture establish itself in IT infrastructures, and businesses of every size are investing heavily in integrated ERP (enterprise resource planning) systems. This is the heyday of the big ISVs and databases such as Oracle and SAP, whose respective leaders lend their support to **Bull's new Escala server family**. Once again, Bull is at the turning point for computing, with these powerful and highly scalable servers; the fruit of a collaboration with IBM. A key advantage is that Escala™ runs under Unix® (one of Bull's areas of in-depth expertise), which from 1987 onwards is clearly **focused towards open systems**.



1994



LARGE-SCALE BUSINESS SYSTEMS

With **Series 60**, Honeywell-Bull offers a comprehensive family of computers based on its GCOS operating system, from minis to mainframes. Extremely robust and efficient, these large-scale business systems are designed specifically to manage and process increasingly large amounts of data. They are used not only by big companies and governments, but also by businesses who at the time are just SMEs, including fashion house **Charles Jourdan**, furniture company **Knoll**, home appliance manufacturer **Seb** and **Jacques Borel's roadside restaurants in France**. As an ad campaign at the time says, **IT is getting 'creative'** and Bull is helping its customers as their businesses evolve.

1975



THE INTERNET GENERATION

From 1996, Bull brings the first global answer to **the internet security concerns of enterprises**. With its consulting and integration services Bull sets out to help its customers be part of the 'new economy'. In 1999 and 2000, its **'Network of confidence'** campaigns perfectly illustrate its proposed approach: to update IT infrastructures and transform processes to become part of the network and make the most of its potential, whilst constantly focusing on security. Bull has already understood that **trust** will be a cornerstone of the still-emerging digital society.



1999

2005

INNOVATION IN ITS SIGHTS

For all businesses, speed and innovation have become the vital keys to success in a largely computerized and globalized economy. Capitalizing on its traditional areas of expertise, Bull also boosts its own R&D efforts to give customers the tools they need to drive their own innovation. **bullion**, the world's fastest enterprise server; **bullx**, named as the world's best supercomputer; and above all **Tera 100, Europe's first Petaflops-scale supercomputer** all illustrate this approach, drawing on the highest levels of skills.



1979

SMART CARDS TAKE SECURITY TO A NEW LEVEL

By 1979 the **CP8 card** was being marketed as **"the first microprocessor card"**: the first card featuring an intelligent chip; designed for payments systems applications, access control, carrying data and more. As well as this card, Bull will gradually offer complete solutions covering everything from payment terminals to secure transactional systems. This business, which will be sold 20 years later to Schlumberger, is now part of Gemalto.



THE EUROPEAN IT PLAYER

In May 1981, it is a team from Bull that provides the computerized forecasts for the results of the French presidential election. For the first time, they are able to show a **scanned image of the winner François Mitterrand**, directly on the screen. Three years later, on 2 May 1984, Mitterrand himself visits Bull to celebrate **the launch of the one thousandth DPS 7 mainframe**. Thanks in particular to the success of this GCOS mainframe, **Bull is now the leading European player in the IT industry**. The Group is an end-to-end provider offering hardware, solutions and, increasingly, services. In 1985, Bull builds its first data center at Trélazé, near Angers in France. This will be extended in 1990, with its first outsourcing contracts being signed in 1993.



1984



2011

THE TRUSTED PARTNER

Backed by the legacy of its technology and people – and further strengthened by joining forces with Amesys – Bull has everything it takes to be a major player in tomorrow's digital society: the world of the Cloud, mega-amounts of data, mobility, and total security. In this hyper-connected environment, where technology has the pivotal role, businesses and the public sector alike must be able to rely on specialists who can provide unfailing support and **guarantee the security of their information systems**. Ensuring that it is just such a trusted partner to its customers, and a **leader in mission-critical digital systems by end 2013**: these are the next chapters in Bull's long history.



"During these 80 years,
Bull has continued to reinvent itself around his skills
and core values in mind to address
the new computer revolution, the digital power,
the hyperconnexion, power and security".

Philippe Vannier, Bull Chairman and CEO

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