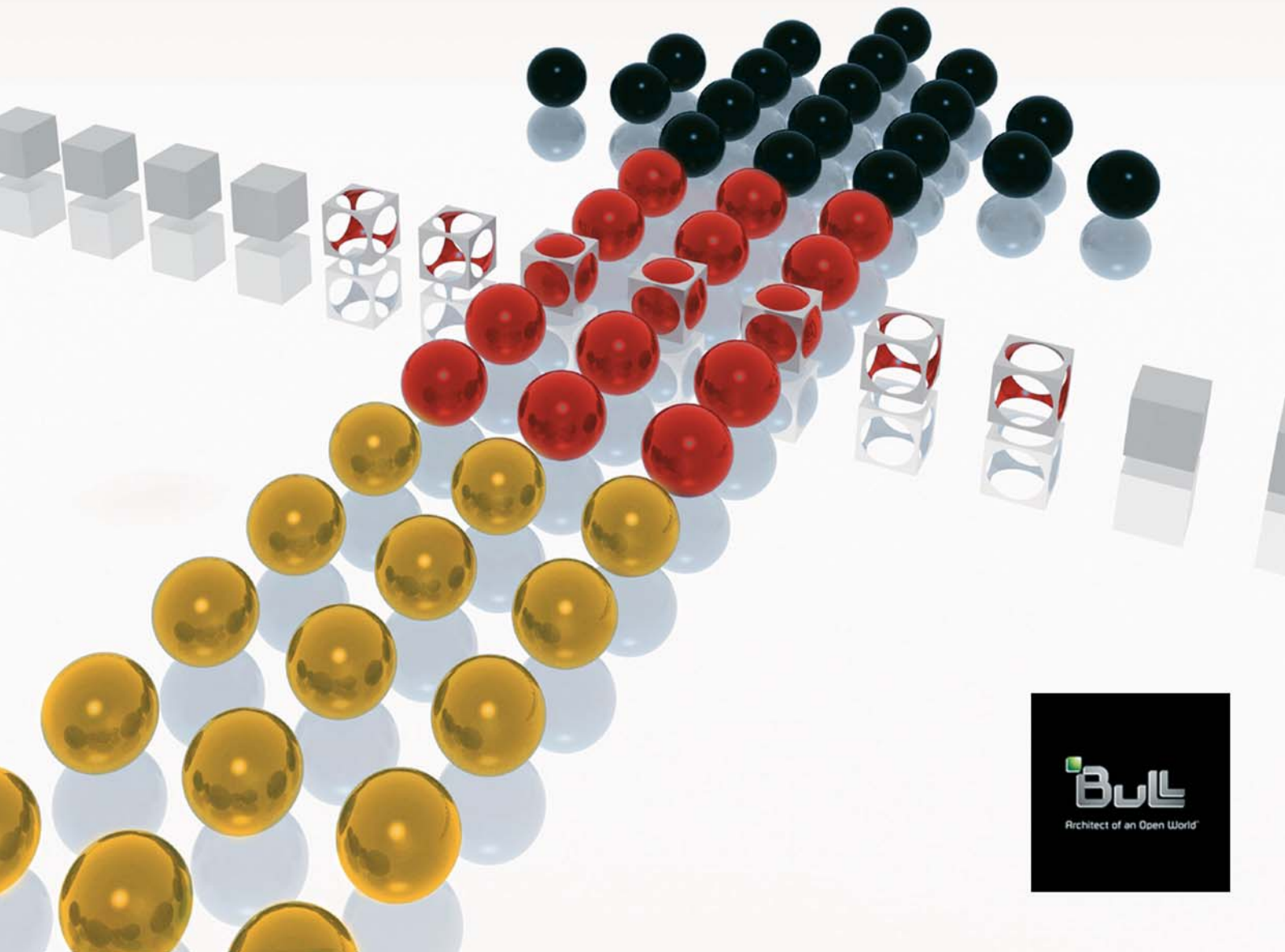


A double first for Bull in Germany

New supercomputer for Forschungszentrum Jülich research center,
acquisition of s+c in Germany:

Bull sets its sights on HPC leadership in Europe.



BULL
Architect of an Open World™

[NEW SUPERCOMPUTER FOR FORSCHUNGSZENTRUM JÜLICH RESEARCH CENTER, ACQUISITION OF S+C IN GERMANY: BULL SETS ITS SIGHTS ON HPC LEADERSHIP IN EUROPE.]

COMPUTER SIMULATION

A double first for Bull in Germany

Thanks to its fantastic power, amounting to thousands of billions of operations per second, High-Performance Computing (HPC), is enabling us to push back the frontiers of human knowledge yet further. With its ability to explore the secrets of matter and life itself, and to simulate how a nuclear reactor or the wing of an aircraft might behave, the supercomputer has become the essential tool for research and innovation. Investing in these kinds of systems is a high priority for the European Union, which aims to ensure that knowledge is the catalyst for its economic competitiveness. But the number of enterprises in the world capable of designing, integrating and deploying supercomputers can be counted on the fingers of one hand. And among them, only one is European: Bull.

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Bull's ambitions in Europe

Bull has identified HPC as one of its key areas for strategic development, and is drawing not only on its expertise, but also on its close geographic and cultural proximity in its aim to become the supplier of choice for enterprises, universities and research centers across the continent of Europe. When it comes to meeting such demanding requirements, it is essential to have rapid access to experts who are familiar with the challenges faced by customers and who have in-depth understanding of the specific demands of each type of application. *"The difficulty lies not just in assembling hundreds, or even thousands of servers, but in honing the tools needed to exploit all the available power. If we want practical performance to correspond to theoretical performance, every single choice is crucial"*, explains Fabio Gallo, Vice-President and Director of HPC Solutions at Bull.



Besides its successes in France, most notably Tera-10 – the supercomputer developed for the French Atomic Energy Authority (the CEA) which was the most powerful machine in Europe and the fifth most powerful in the world when it went into service in 2006 – Bull has rapidly grown its HPC business, and now has more than 120 customers in 15 countries across three continents. Success in Germany is a key step in this international strategy. But three events have recently given the company vital impetus in this key market in Europe: the renewed confidence demonstrated by the Jülich Research Center, which has chosen Bull for two projects to supply some of the most powerful systems in Europe, and the acquisition of science+computing AG (s+c), a German company specializing in HPC.

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→THOMAS LIPPERT

DIRECTOR OF THE SUPERCOMPUTING CENTER AT THE JÜLICH RESEARCH CENTER
« COMPUTER SIMULATION IS AT THE HEART OF A GROWING NUMBER
OF SCIENTIFIC AND INDUSTRIAL DISCIPLINES,
TO THEIR GREAT BENEFIT. »



The JuRoPA project: a first supercomputer for the Jülich Research Center

The Forschungszentrum Jülich (Jülich Research Center) in North Rhine-Westphalia plays host to some 4,400 staff and 800 scientists from 50 countries every year, making it one of the largest interdisciplinary research centers in Europe. It is particularly renowned for its work in medicine, physics – one of its researchers, Peter Grünberg, was awarded the Nobel Prize in 2007 – and environmental sciences. It is also one of the major players in intensive computing in Germany, and its resources are used by all of Germany's scientific and industrial community. "Computer simulation is at the heart of a growing number of scientific and industrial disciplines, to their great benefit," explained Professor Thomas Lippert, Director of the Supercomputing Center at the Jülich Research Center.

To meet this growing demand, the establishment launched the JuRoPA project (Jülich Research on Petaflops Architectures), which aims to study cluster-type technologies to enable the production of cost-effective Petaflops-capacity super-

computers: an area in which Bull is recognized as a world specialist. As part of the JuRoPA program, Bull was chosen in September 2008 as project manager and integrator of a machine delivering around 200 Teraflops of power (200,000 billion operations per second). "We are convinced by Bull's extensive expertise when it comes to bringing together the best technologies, to design a supercomputer that is both energy efficient and provides optimum power to support multiple types of applications," Professor Lippert continues.

Bull's JuRoPA supercomputer will open up new horizons when it comes to computer modeling and simulation, as well as new types of research project. Innovative applications involving energy management, new materials and climatology are also planned. "Today's world is being overturned by profound phenomena: whether they are the challenges posed by climate change, longer life expectancy or the energy crisis. If we are going to face these challenges, we must be able to understand them and come up with appropriate solutions. And High-Performance

Computing is an absolutely essential tool for doing just that," concludes Professor Lippert.

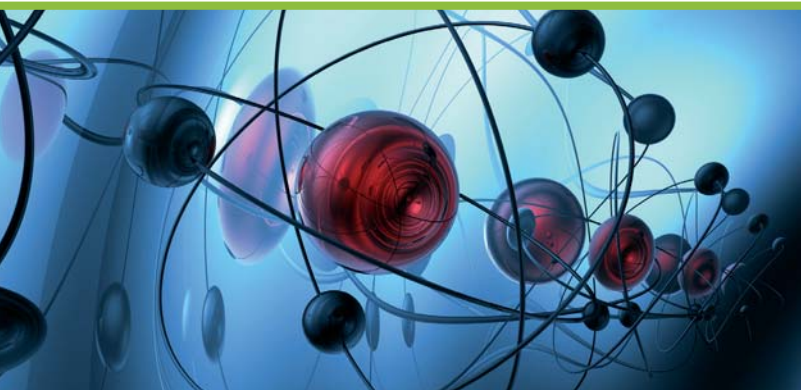
A second supercomputer at the Jülich Research Center prepares for the energy of the future

At the start of 2009, the Jülich computing center placed a new order with Bull for an additional 100 Teraflops-capacity supercomputer. This machine is destined to host applications for the European Union's Fusion program – whose main aim is to accelerate understanding of nuclear fusion for civil use, so as to be able to tackle tomorrow's energy challenges.



- ESTABLISHED IN 1956
- €360 MILLION ANNUAL BUDGET
- 4,400 STAFF
- PLAYS HOST TO 800 SCIENTISTS FROM 50 COUNTRIES EACH YEAR





From the moment it goes into service, Bull's HPC-FF supercomputer will be used to validate the latest computer-generated models in plasma physics and turbulence simulation. It will also be used in fast particle physics and materials physics. The simulations produced by HPC-FF will enable the models developed by researchers to be refined, and in particular, optimize the use of the International Thermonuclear Experimental Reactor or ITER.

The Fusion community will also be able to draw on computing power from Bull's JuRoPA supercomputer. The two machines will be installed by Bull during the second quarter of 2009, to form a computing platform with a global capacity of more than 300 Teraflops. *"The HPC-FF supercomputer at Jülich – the use of which will be organized under the EFDA European cooperation agreement – will enable us to move forward on some crucial scientific unknowns, and so accelerate our research into nuclear fusion. These new resources will put Europe at the forefront scienti-*

fically when it comes to supporting the ITER project," explains Jérôme Paméla, Leader of the EFDA (European Fusion Development Agreement).

Bull acquires s+c, experts in HPC solutions

While this double success story highlights Bull's ability to export its know-how, the company is still aiming to strengthen itself in order to meet the challenge of High-Performance Computing in Europe. Following its acquisition of French company Serviware in 2007, in 2008 Bull announced its intention to purchase science+computing AG (s+c), emphasizing the critical importance the German market in its strategy for growth. With its recognized expertise in HPC and computer simulation technologies, s+c has a particularly strong presence among the major players in the automotive and aeronautics sectors and related industries. s+c's headquarters are in the Stuttgart region, and the firm has offices in Munich, Berlin and

Düsseldorf, employing more than 200 experts in scientific and intensive computing. *"s+c brings with it extensive experience in solutions and services for customers in the automotive and industrial sectors, and will help grow Bull's offering in infrastructure services. Together, Bull and s+c will breathe new dynamism into the HPC market in Europe,"* says Didier Lamouche, CEO of Bull, with satisfaction.

With the acquisition of science+computing AG and the significant and prestigious customer reference represented by the Jülich supercomputers, Bull is taking a leading position in the HPC market in Germany: a new step forward for Bull, with its firm committed to conquering the European supercomputer market.



- ESTABLISHED IN 1989
- €26 MILLION ANNUAL BUDGET
- 270 STAFF
- FOUR SITES: TÜBINGEN, MUNICH, BERLIN AND DÜSSELDORF

