

Digital Agenda: Commission welcomes launch of supercomputing infrastructure for European researchers

The European Commission today welcomed the launch of a €500 million initiative which boosts European supercomputer capacities and opens them up to scientists across Europe. The Partnership for Advanced Computing in Europe (PRACE) unites the European Commission and 20 countries across Europe in a unique initiative which will enable researchers to use super fast computers located in other countries to make up to 1000 trillion calculations per second for their research projects. This could be used for example to speed up the development of more efficient solar cells or help us understand how drugs interact with the human body. Europe's fastest computer, JUGENE in Germany, will be the first machine available to European scientists under the PRACE initiative. By 2015 more supercomputers in Germany, France, Italy and Spain will be available across the EU. The initiative remains open to other countries that can host such supercomputers. The Commission is contributing more than €70 million to PRACE, which strengthens European research and competitiveness, in line with the objectives of the Digital Agenda for Europe ([IP/10/581](#)), a flagship initiative under the Europe 2020 strategy ([IP/10/225](#)).

Commission Vice-President for the Digital Agenda Neelie Kroes said: "I warmly welcome the launch of the PRACE supercomputer infrastructure as scientific computing is a key driver for the development of modern science and technology and for addressing the major challenges of our time like climate change, energy saving and the ageing population."

The Partnership for Advanced Computing in Europe (PRACE) was officially launched in Barcelona today when the major contributors, Spain, France, Italy and Germany, signed the statutes of the PRACE organisation. PRACE, an international non-profit association, will bring together supercomputers of world-class capability across Europe to form a single infrastructure. This will give researchers access to a combined computing power equivalent to more than 100,000 of today's fastest PCs, and will speed up calculation time tremendously to up to 1000 trillion calculations per second.

This means that research can be conducted incomparably faster, at massive scale and far more accurately. It also means we can now address problems that we could not solve before because they were too large and complex. This new way of doing science will be available to scientists from all over Europe on the basis of the scientific merit of the research to be carried out. In this way PRACE helps to expand scientific knowledge which in turn delivers social and economic benefits.

For example, thanks to the capacity of the PRACE infrastructure, researchers will be able to investigate photosynthesis at sub-atomic level, which in turn can improve the way solar cells are built today. Scientists can also investigate 3D protein folding, which helps them understand how drugs interact with cells in the human body. Knowledge of the process of blood flow in cardiac disease could be increased, which will allow doctors to predict heart attacks and take timely actions to save lives.

Spain, France, Italy and Germany have each committed to invest €100 million in the PRACE initiative over the next 5 years. The European Commission is contributing €70 million through the EU's 7th Research Framework Programme. Sixteen other countries (Austria, Bulgaria, Cyprus, Czech Republic, Finland, Greece, Ireland, The Netherlands, Norway, Poland, Portugal, Serbia, Sweden, Switzerland, Turkey and UK) are also taking part with smaller contributions of resources and expertise.

Scientists will be able to fully use the PRACE infrastructure from 1 August 2010, after their application has been approved by a common European Peer Review process. The first supercomputer available to all European researchers is the JUGENE system located in Jülich, Germany. It is the fastest in Europe and fifth fastest in the world. More supercomputers will be made available from 2011 onwards.

For more information on PRACE:

www.prace-project.eu