

What is the Grid?

The Grid provides enormous computing and knowledge power on demand in the same way as the electricity grid supplies electricity.

Instead of data coming out of the electricity plug in the wall, you now get access to knowledge and massive amounts of data from thousands of other computers spread across the globe. This knowledge is manipulated through your PC to provide you with instant answers to queries spread worldwide.

The Grid allows us to solve complex problems that could not be tackled otherwise. It provides widespread access to computing and is an enabling tool for the creation and management of dynamic virtual collaborations and organisations worldwide.

The Grid is a crucial technology both for science and industry.

CoreGRID and Grid...

CoreGRID aims at strengthening and advancing European scientific and technological excellence, encouraging the mobility of researchers and addressing long-term Grid research to build the foundations for Next Generation Grids, from 2010 and beyond.

CoreGRID not only invests in Grid research. It is also developing more effective routes for the industrial exploitation of the Grid in order to successfully translate research results into economic benefits. CoreGRID drives collaboration between research organisations, funding bodies and industry at all levels of the value chain and across national borders, making sure that industrial needs and commercial ambitions are taken into account while Grid research is conducted.

CoreGRID, Grid and Europe...

The CoreGRID Network is funded by the European Commission within the European Union's Sixth Framework Programme for Research and Technological Development through a grant of €8.2 million assigned for a duration of four years. This support allows the Network to focus on creating a strong and durable integration of Grid research expertise in Europe to facilitate the creation of future Grid systems in both academic and industrial environments. This way, it will contribute to accelerating Europe's drive to turn its substantial Grid research investment into tangible economic benefits.

The CoreGRID Network will contribute to helping Europe take Grids out of the research labs and into industry – a critical step in ensuring Europe realises the benefits of the Information Society.

CoreGRID, Grid, Europe and industry

Grid technologies are considered to be a crucial enabling technology in achieving the productivity and growth challenges necessary to meet the European Union's objective of transforming Europe into the most competitive, knowledge-based economy in the world by 2010.

This importance of Grids is reflected in the European Union's continued and growing financial support for Grid research. In this perspective, the CoreGRID Network of Excellence is recognised to best represent this activity of integrating and coordinating Grid research efforts across Europe and promoting close cooperation with industry, aligning both research and industry towards the construction of a sustainable European Research Area.

CoreGRID - Building Grid for Europe

The CoreGRID initiative was launched on September 1, 2004 and aims at building a virtual European-wide research laboratory that will achieve scientific and technological excellence in the domain of large-scale, distributed Grid and peer-to-peer technologies.

The Network gathers a critical mass of well-established researchers (permanent researchers and PhD students) from research centres and universities into an ambitious joint programme of activities.

Operated as a European Grid Research Laboratory, the joint programme is structured around six strategic and complementary research areas, organised as research Institutes.

- KNOWLEDGE AND DATA MANAGEMENT
- PROGRAMMING MODEL
- SYSTEM ARCHITECTURE
- GRID INFORMATION, RESOURCE AND WORKFLOW MONITORING SERVICES
- RESOURCE MANAGEMENT AND SCHEDULING
- GRID SYSTEMS, TOOLS AND ENVIRONMENTS

Each one of these Institutes is dedicated to a particular domain identified as of strategic importance to ensure the durable development and deployment of Grid infrastructure.

It is the primary objective of the CoreGRID Network of Excellence to build solid foundations for Grid and peer-to-peer on both a methodological and a technological basis and to stay at the forefront of scientific excellence. This is achieved by structuring research activities, leading to integrated research among experts from relevant fields, specifically parallel and distributed systems, middleware, programming models, algorithms, tools and environments.

To comply with this long-term objective, the CoreGRID Network defines and conducts a joint programme of activities in order to integrate and co-ordinate the ongoing research activities of the major European research teams in the field of Grid and peer-to-peer technologies. These research teams bring both high-level expertise into particular areas and also their own capabilities in influencing their national programmes in Grid and peer-to-peer technologies, allowing better long-term integration.

The way this programme has been implemented, structuring integrated research activities jointly executed by the best teams in Europe, ensures real integration of the research carried out in Europe to fit the goal of a Network of Excellence defined by the European Commission in the Sixth Research Framework Programme. The ideas driving the CoreGRID project within this context are definitely excellence, integration, dissemination and sustainability.

CoreGRID has clearly set out on the path towards accomplishing its grand vision for a feasible Next Generation Grid.

CoreGRID

For more information, visit our website on www.coregrid.net

You can contact the CoreGRID members via e-mail: coregrid@cetic.be

You can subscribe to our quarterly newsletter on www.coregrid.net

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GRID SYSTEMS, TOOLS AND ENVIRONMENTS

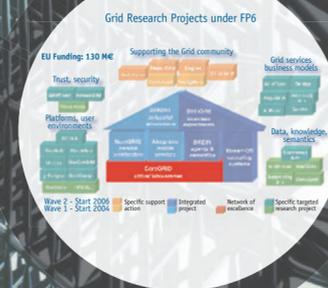


GRID INFORMATION, RESOURCE AND WORKFLOW MONITORING SERVICES

SYSTEM ARCHITECTURE



KNOWLEDGE AND DATA MANAGEMENT



RESOURCE MANAGEMENT AND SCHEDULING

PROGRAMMING MODEL



CoreGRID

European research network on foundations, software infrastructures and applications for large-scale, distributed Grid and peer-to-peer technologies



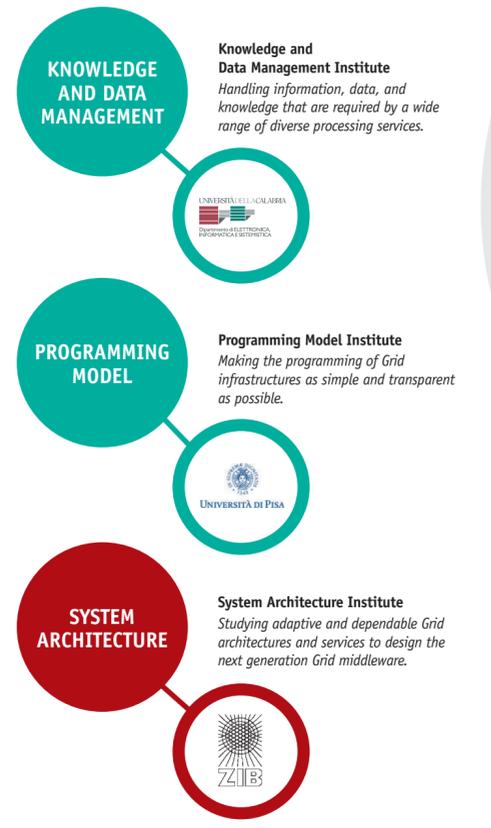
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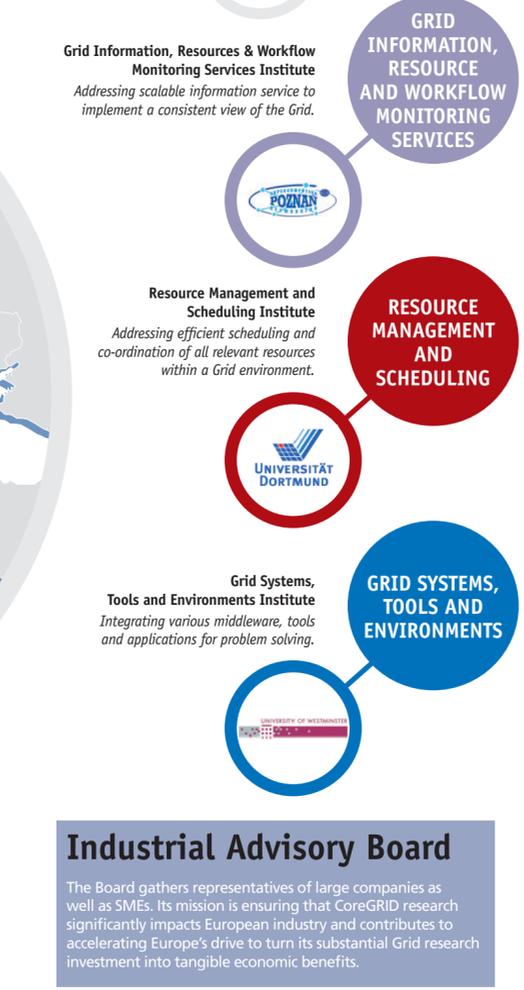
The Grid European Research Laboratory

The CoreGRID Network of Excellence is operated as the **Grid European Research Laboratory structured around six strategic and complementary research areas**, referred to as Institutes. The objective is to build solid foundations for Grid and peer-to-peer technologies on a theoretical, a methodological and a technological basis.



Scientific Advisory Board

Composed of three CoreGRID scientists and three external scientific experts, the SAB is acting as a peer-review council, ensuring the assessment of the work progress and overall scientific quality achieved by the Network. Through recommendations and strategic guidance provided by the SAB, CoreGRID ensures the excellence of the Network.



Industrial Advisory Board

The Board gathers representatives of large companies as well as SMEs. Its mission is ensuring that CoreGRID research significantly impacts European industry and contributes to accelerating Europe's drive to turn its substantial Grid research investment into tangible economic benefits.



"Grid technologies are at a turning point in their evolution for industry to step in and transform the world-class research results into key services to drive European growth in the 21st century."

"Grid will be a 'crucial enabling technology' in achieving the i2010 (European Information Society 2010) initiative, which looks to promote cooperation between industry and Member States in order to achieve a borderless European information space, stimulate innovation, and make the European Information Society as inclusive, secure and accessible as possible."

"Grids are an excellent enabler of service-oriented knowledge utilities. However, we must stress the importance of the co-ordination between the research and industry sectors to make this a reality."

"Europe is in an excellent position to shape and steer a technological revolution via Grid technologies."

By Viviane Reding, Commissioner for Information Society and Media, European Commission

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