

### **EGEE-III- Enabling grids for e-science III**

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A globally distributed computing Grid now plays an essential role for large-scale, data intensive science in many fields of research. The concept has been proven viable through the Enabling Grids for E-science project (EGEE and EGEE-II, 2004-2008) and its related projects. EGEE-II is consolidating the operations and middleware of this Grid for use by a wide range of scientific communities, such as astrophysics, computational chemistry, earth and life sciences, fusion and particle physics. Strong quality assurance, training and outreach programmes contribute to the success of this production Grid infrastructure.

Built on the pan-European network GEANT2, EGEE has become a unique and powerful resource for European science, allowing researchers in all regions to collaborate on common challenges. Worldwide collaborations have extended its reach to the benefit of European science.

The proposed EGEE-III project has two clear objectives that are essential for European research infrastructures: to expand, optimize and simplify the use of Europe's largest production Grid by continuous operation of the infrastructure, support for more user communities, and addition of further computational and data resources; to prepare the migration of the existing Grid from a project-based model to a sustainable federated infrastructure based on National Grid Initiatives.

By strengthening interoperable, open source middleware, EGEE-III will actively contribute to Grid standards, and work closely with businesses to ensure commercial uptake of the Grid, which is a key to sustainability.

Federating its partners on a national or regional basis, EGEE-III will have a structuring effect on the European Research Area. In particular, EGEE-III will ensure that the European Grid does not fragment into incompatible infrastructures of varying maturity. EGEE-III will provide a world class, coherent and reliable European Grid, ensuring Europe remains at the forefront of scientific excellence.

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