



German Steps to e-Science

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German GRID Initiative (D-GRID)

- Started in February 2003
 - first driven by the HEP community, open for all interested communities and institutions
 - supported by the German Federal Ministry of Education and Research (BMBF)
- Actual members: Research Institutes (HEP, Climate, FhG ...), HPC Centers, universities, DFN (German NREN), vendors, user groups (scientific, industrial)
- Strategy paper (draft version) in October 2003:
 - establishment of a competence network
 - creation of a sustainable basis infrastructure
 - development of Grid software and tools
 - establishing of user driven pilot projects
- Current situation:

Constitution of working groups to:

 - refine the strategy paper with respect to the application level
 - define technical and R&D demands for a national wide Grid
 - support in preparation of R&D projects

MoU in prepare to set up a national platform for Grid and e-science applications

German Network for e-science and experimental applications

D-GRID as a nucleus for a *German Network for e-science and experimental applications*

- to overcome the limits of capability
- to establish new models of collaborative research
- to use distributed databases and simulation codes
- to profit from the possibilities of digital data and archives
- to enable knowledge-intensive applications
- to develop challenging services for scientist (S4S)
- to establish user financed business models

Long-term Vision

Integrated Scientific Working Environments

- connecting new forms of collaboration, organization, cooperation and communication in scientific core areas
with
an extensive knowledge processing (semantic services)
- allowing the transparent use of a broad spectra of e-science-services by different providers and service companies

Research Program

- **Elements**
 - D-GRID competence network and infrastructure
 - integration of partners with their resources on base of a high-performance backbone
 - seamless access to resources by uniform interfaces
 - Grid-software initiative (from 2004/2005)
 - homogenization and standardization of grid middleware
 - network- and application-specific service development (QoS)
 - e-science pilot projects and development of “Services for Scientists” (S4S)
- **Phase 1 (2004 – 2008)**
 - Homogenization and qualification of the Grid-infrastructure by prototypical applications
 - generic middleware development (toolkit for e-science)
- **Phase 2 (from 2007/08)**
 - National Grid-Infrastructure on production level
 - establishing of e-science applications and services
- **Prerequisite: Cooperation of science and economy**

Projects with partners from science and economy are deeply recommended

Methods and time schedule

