2.6.5 – International Co-operation

Grid Technologies – Target Country: China

Annalisa Bogliolo
Grid Technologies Unit
European Commission
annalisa.bogliolo@cec.eu.int
http://www.cordis.lu/ist/grids
What is the Grid?

“A Grid provides an abstraction for resource sharing and collaboration across multiple administrative domains…”


Benefits

- Increased productivity by reducing Total Cost of Ownership
- Any-type, anywhere, anytime services by/for all
- Infrastructure for dynamic virtual organizations
- Backbone for future service-oriented utility

Examples

- Ad-hoc Grid services for emergency response
- Cost-effective simulation for automotive and finance
- More efficient drug design and healthcare
Grid Research Projects in FP6 – call2/call3

EU Funding: 53 MILLION
Start: SUMMER 2004

- Grid@Asia (Spring 2005)
  Towards EU-Asian Co-operation

- GRIDCOORD
  Building the ERA in Grid research

- UniGridS
  Extended OGSA Implementation based on UNICORE

- HPC4U
  Fault tolerance, dependability for Grid

- K-WF Grid
  Knowledge based workflow & collaboration

Grid-based generic enabling application technologies to facilitate solution of industrial problems

- EU-driven Grid services architecture for business and industry
  NextGRID

- Mobile Grid architecture and services for dynamic virtual organisations
  Akogrimo

- Provenance
  Trust and provenance for Grids

- OntoGrid
  Knowledge Services for the semantic Grid

- DataminingGrid
  Datamining tools & services

- inteliGRID
  Semantic Grid based virtual organisations

- SIMDAT
  EU-driven Grid services architecture for business and industry

European-wide virtual laboratory for longer term Grid research-creating the foundation for next generation Grids

CoreGRID

Specific support action  Integrated project  Network of excellence  Specific targeted research project
Work Programme 2005-2006
Advanced Grid Technologies, Systems and Services

Grid-enabled Applications & Services for business and society
Research, development, validation and take-up of generic environments and tools

Grid Foundations
Architecture, design and development of technologies and systems for building the invisible Grid

Network-centric Grid Operating Systems
Potential new fabric layer for future distributed systems and services

Advanced Grid Technologies, Systems and Services

Application Sector 1
Application Sector 2
Application Sector 3
Application Sector n

IST Call 5
Open May 2005
Close Sept 2005
Budget: ~70M€

Application Pull
technology Push

e-bus, e-health, e-gov, e-learning Environment, ...

Information Society and Media Directorate-General
Unit Grid Technologies
NCP Info Day Call6 - Brussels, 24 January 2006
International Co-operation on Grid Technologies – Target Country: China

**Background**

- China has well established programs and a critical mass of research in the Grid technologies area
- There are many research and application areas in common with potential for co-operation
- There is common interest in the EU and China in promoting collaboration among the existing Grid initiatives and in setting up a framework for long-term cooperation
- Grid@Asia: SSA whose objective is to ease an EU Asian cooperation in Grid Technologies
Grid activities in China (I)

Ministry of Science and Technology

⇒ China National Grid (CNGrid); part of the National Hi-tech Program (863)

NSF of China

⇒ CROWNE Grid

Application Grids

⇒ ChinaGrid, supported by the Ministry of Education
⇒ China Science Data Grid (SDG), supported by the Chinese Academy of Science
Examples of Grid initiatives in China

- Grid Test-bed
- Grid Software Development
- Geological Survey Grid; Digital Forest Grid
- Meteorological Application Grid
- Aviation Grid
- Simulation and Manufacturing Grid
- Bioinformatics Grid; New Drug Discovery Grid
- Traffic Information Grid
International Co-operation on Grid Technologies – Target Country: China

Objectives of the Call

⇒ to develop strategic partnerships building on common priority areas

⇒ to explore new collaboration opportunities for the take-up of Grid-enabled applications by end-users

⇒ promoting common developments of standards and building joint virtual laboratories involving research and industry
Work Programme 2005-2006
International Cooperation on Grid Technologies
RESEARCH FOCUS

Grid-enabled Applications & Services
for business and society
Promote global adoption of Grid
environments and tools

Grid Foundations
Architecture, design and development of technologies
and systems for the Grid

Application Sector 1
Application Sector 2
Application Sector 3
Application Sector n

Technology Push
Application Pull

IST Call 6
Indicative Budget 5M€

e-bus, e-health, e-
goy, e-learning

International Cooperation on Grid Technologies
Proposals shall leverage and integrate existing initiatives in the focal areas in Europe and the target country.

- **Instruments:** STREPs, SSAs, CAs
- **Indicative budget:** 5 M €
Conclusions

- Complements the main Grid research activities in previous calls, now from an international co-operation perspective
- Addresses both research developments and business / industrial applications
- Proposals shall link existing initiatives in the EU and China
- To establish a long-term co-operation framework with the target country
Further Info on Call6 Grid Technologies

• **Information Days**
  - 27th January in Brussels
  - 22nd February in Shanghai

  All information distributed at the information days will be made available on the web

• **IST Work Programme 2005/2006**
  http://www.cordis.lu/ist
Further Info on Grid Research

• **Brochure: Building Grids for Europe**
  FP6 Grid Project Fact Sheets, FP5 Grid Project Achievements

• **Expert Group Reports**
  - “Next Generation Grid(s) – European Grid Research 2005 - 2010”, 2003

• **Grid@Asia** [http://www.gridatasia.net](http://www.gridatasia.net)

and more: [www.cordis.lu/ist/grids](http://www.cordis.lu/ist/grids)