



Enabling Grids for E-sciencE



Bob Jones EGEE project director CERN

www.eu-egee.org





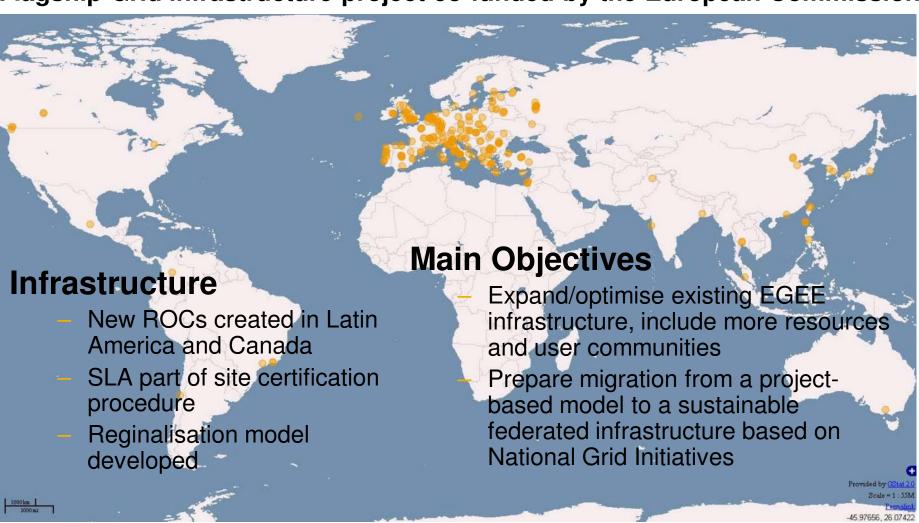






Enabling Grids for E-sciencE

Flagship Grid infrastructure project co-funded by the European Commission



Duration: 2 years (May 2008-April 2010

Consortium: ~140 organisations across 33 countries

EC co-funding: 32 Million €





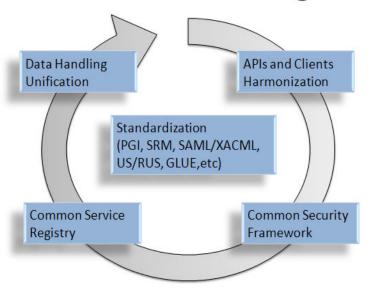
Enabling Grids for E-sciencE

- gLite Open Collaboration now in place
 - 15 partners forming a new framework for the maintenance and future evolution of the gLite middleware beyond the end of EGEE project
- Product teams combining integration & development/support staff in place





Harmonization Targets





EGI now exists

Enabling Grids for E-sciencE

Joint STFC/EGEE Press release: New organisation to coordinate European scientific computing grids

1 March 2010 - Press Release

New organisation to coordinate European scientific computing grids

A new organisation that will support the sustainable future development of leading-edge, collaborative scientific computing has been established following the signing of legal documents in Amsterdam.

The European Grid Initiative (EGI.eu) will coordinate a European-wide grid computing infrastructure on behalf of its participants (national and community specific resource providers) that will enable scientists across the continent to share their computers to carry out the very best collaborative research projects within Europe and internationally.

Grid computing 'connects' computers that are scattered over a wide geographic area, allowing their computer power, data, instruments and storage space to be shared regardless of their location. It enables the resources of thousands of different computers hosted in university departments and data centres, national facilities, and even desktop PCs, to be combined to create a computing resource capable of making significant breakthroughs in data-intensive scientific research, Grid computing will enable scientists exploring what happened after the big bang at the Large Hadron Collider in CERN to analyse the equivalent of 20,000,000 CDs of data (15 petabytes), which is expected to be generated each year, much more quickly by distributing the workload across a grid.

EGI.eu was formally created in Dutch law on 8 February 2010 following the signing of legal documents by its Executive Board, made up of seven representatives elected by the EGI Council, including the UK's EGI Council representative and Director of the Science and Technology Facilities Council's (STFC) e-Science department Dr Neil Geddes.

EGI.eu was formally created in Dutch law on 8 February 2010

www.egi.eu



EGI.eu

- Operate a secure integrated production grid infrastructure that seamlessly federates resources from providers around Europe
- Coordinate the support of the research communities using the European infrastructure coordinated by EGI.eu
- Work with software providers within Europe and worldwide to provide high-quality innovative software solutions that deliver the capability required by our user communities
- Ensure the development of EGI.eu through the coordination and participation in collaborative research projects that bring innovation to European Distributed Computing Infrastructures (DCIs)



National Grid Initiatives

20+ NGIs are the basis of EGI











Meet these ones in the exhibition area



Users, projects and applications

Enabling Grids for E-sciencE

| 1 st Demo Session (Monday 12/4 – Tuesday 13/4) | | | | |
|---|---|--|--|--|
| Booth | | | | |
| Number | Title | | | |
| D01 | e-NMR: Computational NMR Infrastructure in life science and system biology | | | |
| D02 | DrugScreener-G: Towards Grid-enabled Large-Scale Virtual Screening Coming into Handy | | | |
| D03 | NeuroLOG: a federated environment for neurosciences supporting multi-centric studies | | | |
| D04 | neuGRID - A Grid-Brained Infrastructure to Understand and Defeat Brain Diseases - 3rd Neuroscientific Data Challenge | | | |
| D05 | Grid-enabled virtual screening service against the epidemiological disease | | | |
| D06 | Cancer Sentinel project: a grid network for distributed medical data management on Cancer. | | | |
| D07 | Grid Web Portal with software plug-ins to chemical software | | | |
| D08 | Porting Scientific Application to the EDGeS Service Grid/Desktop Grid Platform | | | |
| D09 | Impact of the synthetic seismogram archive for the CMT determination | | | |
| D10 | Earthquake Disaster Mitigation on EUAsiaGrid | | | |











20 demos ~40 posters Many collaborating projects present in Uppsala

| 2 nd Demo Session (Wednesday 14/4 –Thursday 15/4) | | | | |
|--|---|--|--|--|
| Booth | | | | |
| Number | Title | | | |
| | User-friendly access to computational services with FARO | | | |
| D01 | portal for EGEE and ENEA-GRID | | | |
| | Interoperabilty among gLite and ARC middleware in | | | |
| D02 | training grid infrastructures: GRIDSEED testcase | | | |
| D03 | XtreemOS Grid Operating System | | | |
| | Using gLibrary with mobile devices: a proof of concept with | | | |
| D04 | Apple iPhone | | | |
| | Using Spare Space in Worker Nodes and Desktop Disks to | | | |
| D05 | Build a gLite Storage Element | | | |
| | | | | |
| D06 | On demand Grid services for training in Earth Observation | | | |
| | Molecular Dynamics and Docking Simulations Using | | | |
| D07 | Parameter Sweep Workflows | | | |
| | | | | |
| D08 | LHCb Data Production System based on the DIRAC project | | | |
| | Applications using Remote Instrumentation in Grid | | | |
| D09 | environment - DORII project | | | |
| D10 | Complex Scientific Workflows exploiting Grid and HPC | | | |



ESFRI @ Uppsala

Enabling Grids for E-sciencE























EEF - European E-Infrastructure Forum

- Forum for the discussion of principles and practices to create synergies for distributed Infrastructures
- **Goal:** seamless interoperation of leading e-Infrastructures serving the European Research Area
- Focus: needs of the user communities that require services which can only be achieved by collaborating Infrastructures
- Initial membership:
 - EGEE & EGI
 - DEISA & PRACE
 - Terena & GEANT
 - The forum recognises the importance of data access and management and is seeking to add a member specialising in service provision in this area for multiple research communities
- Offers a way of interacting as a whole with user communities of a multi-national nature that are interested in making use of the Infrastructures

http://www.einfrastructure-forum.eu/















Group photo

Programme

Enabling Grids for E-sciencE

| Monday | Tuesday | Wednesday | Thursday |
|--------------|--------------|--------------|--------------|
| | Tech. | Tech. | Parallel |
| | Plennary | Plennary | Sessions (7) |
| | Coffee | | Coffee |
| | Break | Coffee Break | Break |
| | Parallel | Parallel | Closing |
| | Sessions (2) | Sessions (5) | Plenary |
| Tutorials, | | | Lunch |
| Workshops | Lunch | Lunch | (paper bag) |
| Openning | Parallel | Parallel | |
| Plenary | Sessions (3) | Sessions (6) | |
| Coffee | Coffee | | |
| Break | Break | Coffee Break | |
| Parallel | Parallel | | |
| Sessions (1) | Sessions (4) | Demos | Tutorials, |
| Demos | Gala Dinner | | Workshops |
| vote fo | or best | vote for | best |

Best demo & poster results

demo

demo & poster

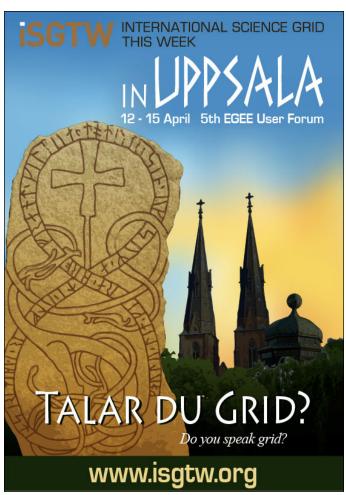


Follow EGEE User Forum online

Enabling Grids for E-sciencE



Read the conference blog at www.gridcast.org



- Follow EGEE on twitter at <u>www.twitter.com/EnablingGrids</u>
 (if you are tweeting from the conference, tag your tweets #egee)
- flickr tag EGEEUF10 for photos (www.flickr.com/search/?q=egeeuf10)
- Demo videos on You Tube at www.youtube.com/EnablingGrids
- Video streaming with Global project

http://vcc.dit.upm.es/spaces/egee/events/5th-egee-user-forum



Key objectives for this event

Enabling Grids for E-sciencE

- Celebrate the launch of EGI
 - Put the final touches to the transition process so the production grid infrastructure continues to operate without interruption
 - Make sure everyone knows the answer to the question "If I have a problem with X on 1st May, who do I call?"
- Transmit and build on the knowledge and lessons learnt from EGEE and collaborating projects to the new structures
- Take into account the user community needs of the new European Research Infrastructures (ESFRI)



Main sponsor:







Sponsor:









Take time to enjoy each others company and Uppsala