The EUAsiaGrid Project

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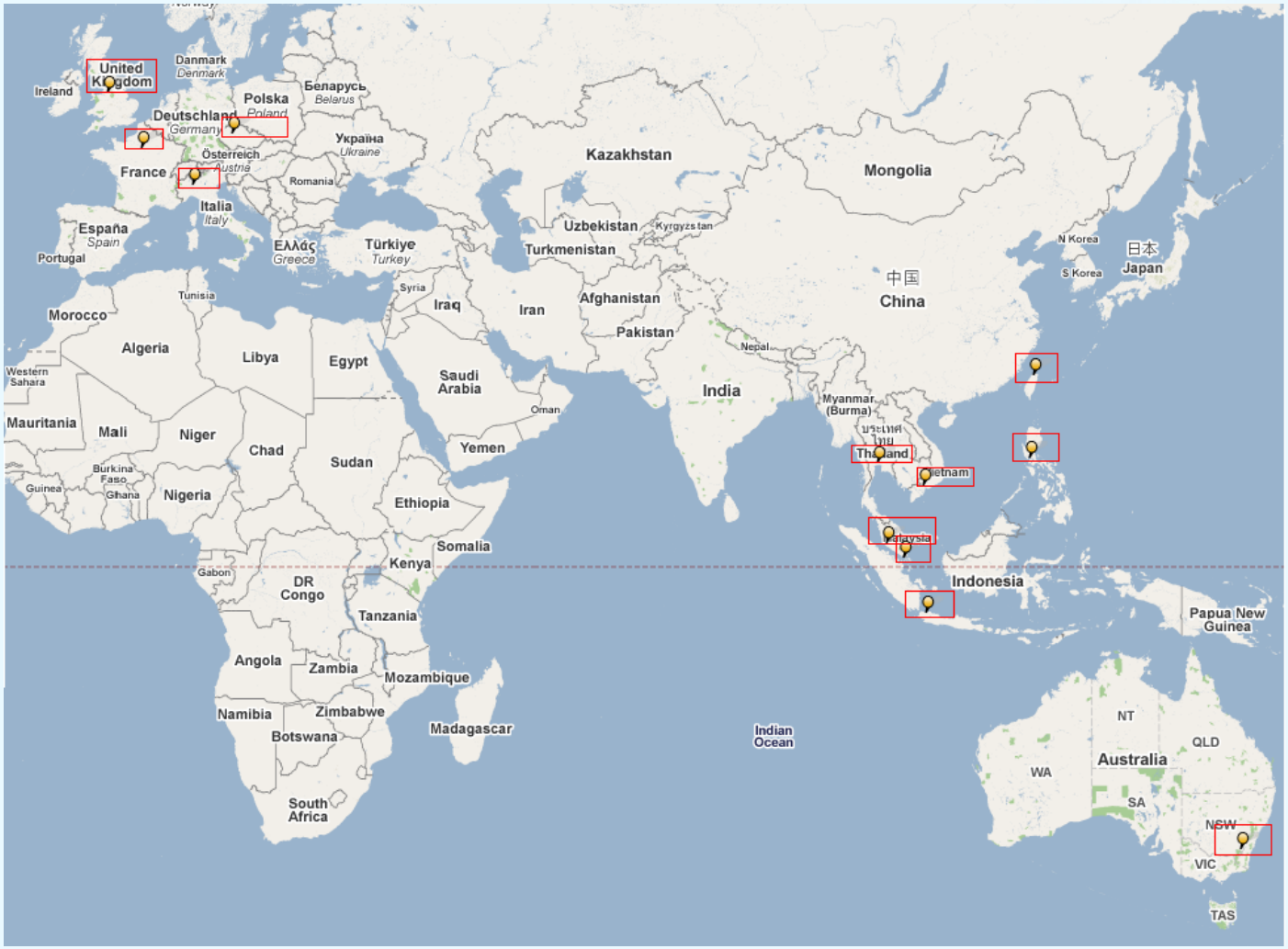
Partners



- ***INFN*** (IT)
- ***CESNET*** (CZ)
- ***NCeSS*** (UK)
- ***HealthGrid*** (FR)
- ***AdMU*** (PH)
- ***ANU*** (AU)
- ***ASGC*** (TW)
- ***ASTI*** (PH)
- ***HAII*** (TH)
- ***IDA*** (SG)
- ***IAMI*** (VN)
- ***ITB*** (ID)
- ***NECTEC*** (TH)
- ***UPM*** (MY)
- ***MIMOS*** (MY)

Objectives

- Promote awareness in the Asian countries of the EGEE infrastructures, middleware and services by means of specific dissemination activities, such as workshops, training events, conferences, and hands-on demonstrations;
- Capture local e-Science user requirements in terms of resources needed, Grid services, application software, and training needs, building on results of the EGI_DS project;
- Build a Euro-Asian Grid community by identifying and aggregating new and existing user communities into a virtual Grid-based research space;
- Assist regional integration with the wider Grid infrastructure in collaboration with the EGEE III Asian Federation and the EUChinaGrid and EU-IndiaGrid projects, thus significantly contributing to the creation of a human network in the area of Grids, e-Science and e-Infrastructures between Europe and Asia;

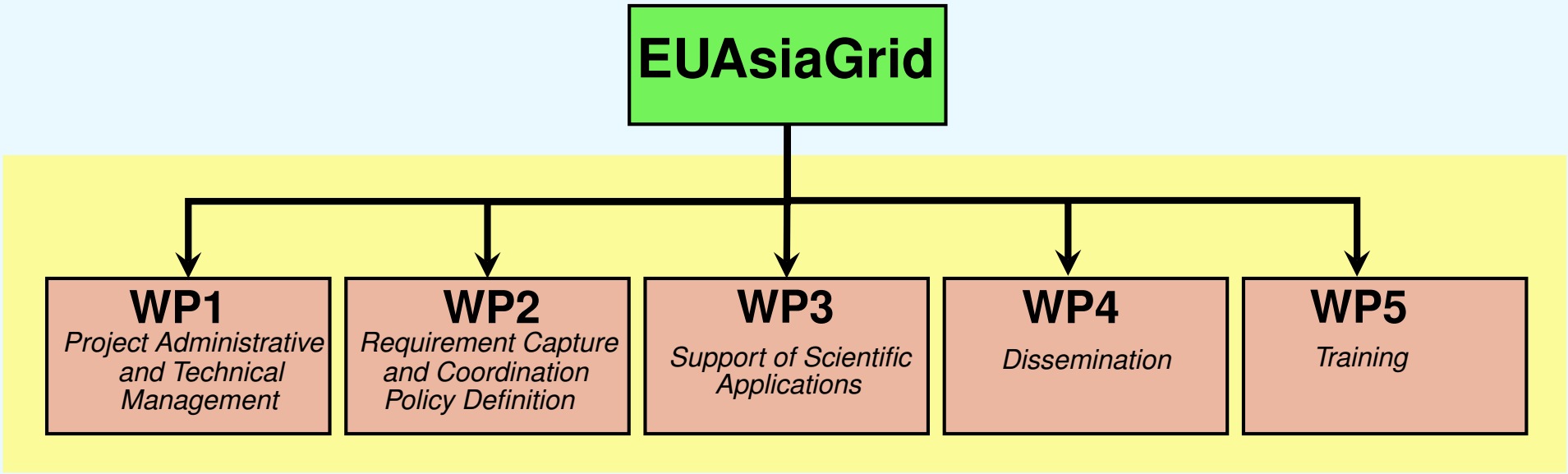
Objectives

- Promote common e-Science applications in Asia and Europe, by supporting the early user communities already engaged in Grid applications (Life Science, Particle Physics), and engaging new ones by coordinating common actions of dissemination and training;
- Provide specific training materials and events targeted to the needs of users in the Asian countries as established in part in Objective 2, and in part building on the experience gained from the EUChinaGRID and EU-IndiaGrid projects;
- Foster international cooperation by working in synergy with members of the EGEE Asian Federation, and the EU-IndiaGrid and EUChinaGRID projects.

Timescale and Budget

- Coordination Support Action funding scheme
- Start date: April 1st, 2008
- Duration: 24 months
- Budget: 1.437k Euro
- EU contribution: 920k Euro
- Collaboration with EGEE-III, EU-IndiaGrid, EUChinaGRID and EGI_DS
- EUAsiaGrid is expected to run on Asia-Pacific infrastructure

Work breakdown



Project Activities

- Project activities are divided in three part:
  - Analyse the current Grid situation and develop a roadmap towards common Asia-Pacific grid infrastructure (WP2)
    - Gather the real Grid requirements for the Asian communities
  - Support for Virtual Organisations and scientific communities (WP3)
    - Work with scientist to assist them in obtaining an efficient use of grids
  - Advertise the project results and engage new users (WP4, WP5)
    - Creation of dissemination material to distribute abroad and organisation of training and other Grid related events

EUAsiaGrid VO

- Generic, application neutral VO
  - No barriers for newcomers
  - Based on the *"catch-all"* approach established in EGEE
  - VO is registered at the CIC portal of EGEE
- Operated by ASGC
- Additional VO could be created on demand
- Registration process fully functional
  - More than 50 users already registered
- Default VO for the training events

EUAsiaGrid Infrastructure

Country	Partner	CPU	Storage (GB)
Czech Rep.	CESNET	80	17
Malaysia	MIMOS	36	1027
Malaysia	UPM	248	933
Malaysia	UM	24	545
Taiwan	ASGC	253	988000
Thailand	HAII	1	1028
Thailand	NECTEC	1	1392
Vietnam	IFI	4	692
Vietnam	IOIT	5	755

Initial Scientific Areas

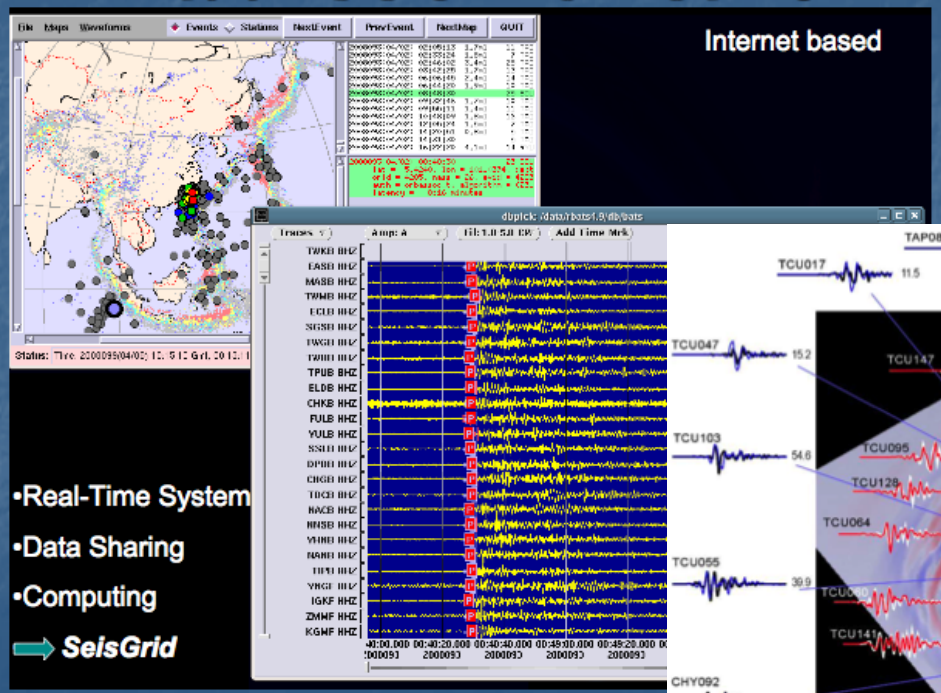
- *High Energy Physics Applications* lead by **INFN**
- *Computational Chemistry* lead by **CESNET**
- *Mitigation of natural disasters* lead by **ASGC**
- *Bioinformatics and Biomedics* lead by **HealthGrid**
- *Social Science Applications* lead by **NCeSS**

Applications Example: Natural Disaster

- Huge interest in the region
  - Different types of natural disasters: Landslides, tsunamis, typhoons, earthquakes, . . .
  - Very limited pre-existing knowledge on the use of grids for this purpose
- Reference applications
  - Earthquake: Seismic Wave Simulation to reduce impacts
  - Climate & Environmental Change: Carbon Flux monitoring, Climate Simulation

Earthquake

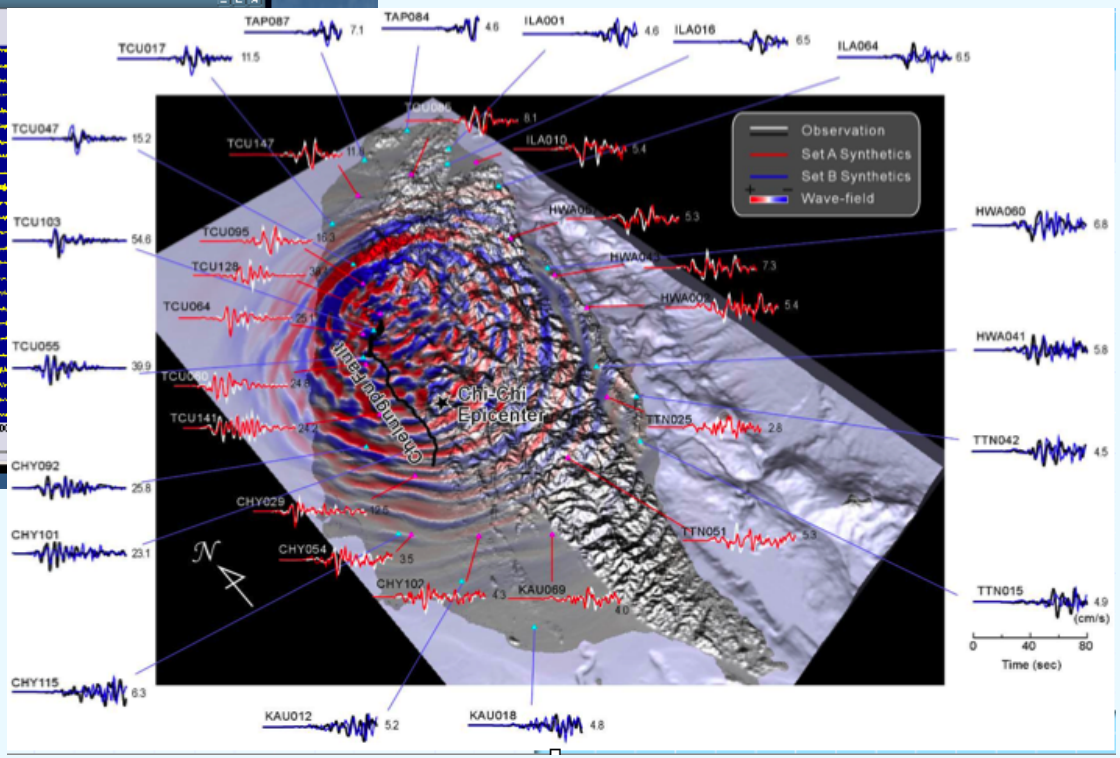
Virtual Seismic Network



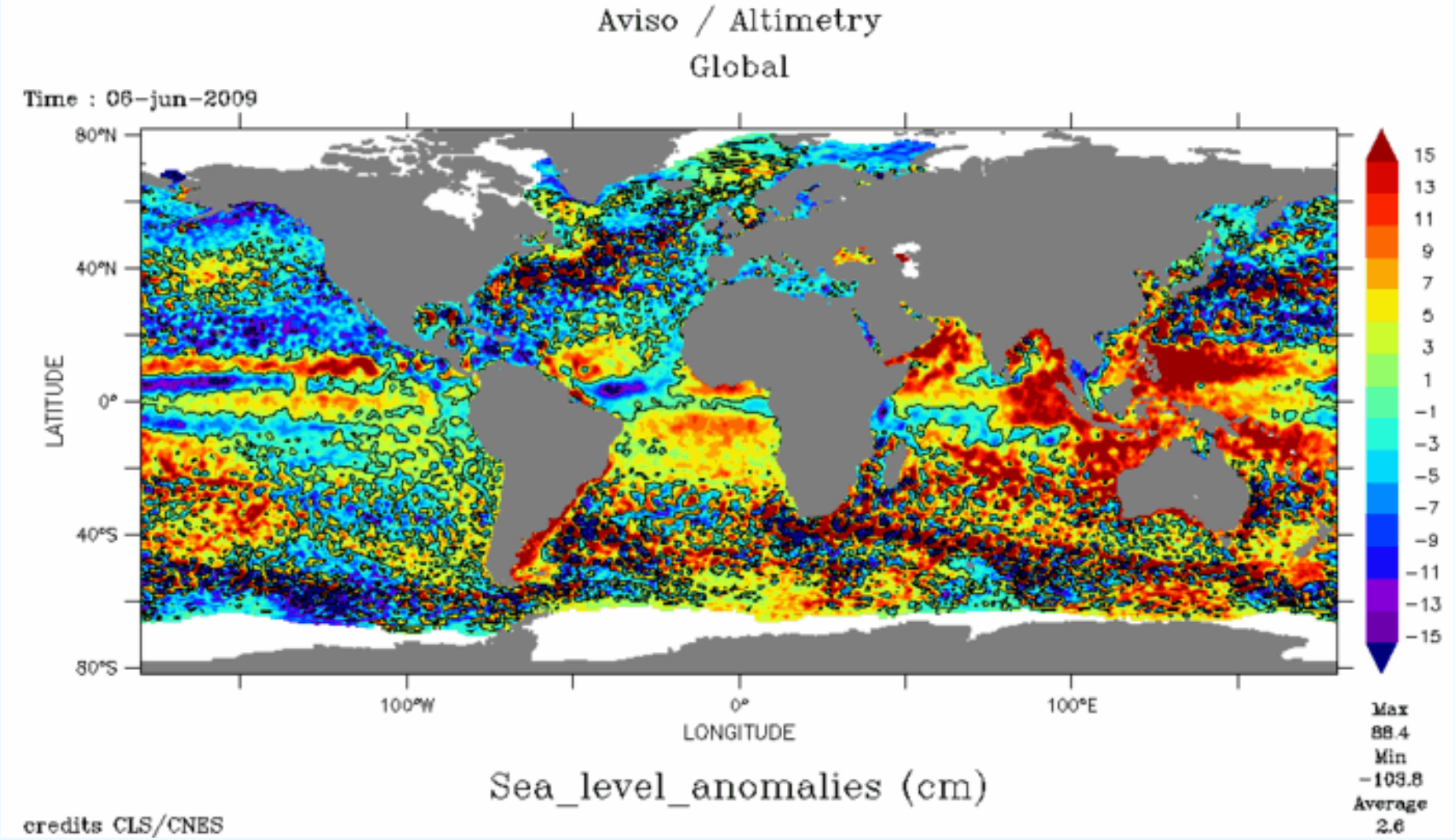
Internet based

- Real-Time System
- Data Sharing
- Computing

➡ *SeisGrid*



Environmental Changes



Other Applications

- Involvement in CMS and Atlas experiments at CERN
- Deployment of same Biomedical applications of EGEE
  - Nuclear Medicine Simulation, Gate
  - Drug Discovery tools, Wisdom
- Deployment of an high-level framework for the Computational Chemistry
  - Charon Extension Layer (CEL)
  - Access to commercial applications (e.g. Gaussian and Turbomole) through EGEE

Additional Activities

- Training and Dissemination play an important role for the project success
- Several training events have been organised to involve Asian scientists with these new technologies
  - More than 100 people already trained
  - Three events scheduled before the project end
- Organisation of and Participation to events in Asia and external countries involving potential users
  - Both Grid related (i.e ISGC) and Application Specific events

EUAsiaGrid web

Web Material

- The training and support section
  - A support forum for help on any gLite and Grid problem
  - A selection of training material coming from training events organised from this and other projects
- An updated list of Grid events relevant for the Asian region
- The contact persons for the project activities
  - Feel free to write to everyone

Join EUAsiaGrid

- The EUAsiaGrid Infrastructure and VO are **open**
  - All institutions in Asia can join the project and share resources
- The former partners can be the access point
  - The easiest way to access the infrastructure is through an agreement with existing partner in your country

Future Activities

- Increase the awareness of Asian scientists of the opportunity provided by the new e-Infrastructure
- Take advantage of results to foster new scientific collaborations between Asia and Europe
- Create a human network in various scientific domains
- Create vigorous synergy with 23 EGEE sites and $>$ 5,000 CPU Cores and $>$ 3 Peta Bytes disk space

Questions?