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Deployment of Remote Instrumentation Infrastructure
and the role of standards

4th e-Infrastructure Concertation Event

Sophia-Antipolis, 5th-6th December 2007

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Deployment of Remote Instrumentation Infrastructure

Project partners

Instytut Chemii Bioorganicznej PAN, PSNC

Consejo Superior de Investigaciones Cientificas, CSIC

Consorzio Nazionale Interuniversitario per le Telecomunicazioni, CNIT

Sincrotrone Trieste SCpA, ELETTRA

European Centre for Training and Research in Earthquake Engineering, EUCENTRE

Johannes Kepler University, GUP

Universität Stuttgart, USTUTT

Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, OGS

Ecohydros SL, ECOHYDROS

Greek Research and Technology Network S.A., GRNET

Universidad de Cantabria, UC

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Project objectives

➢ **Integration of instrumentation and selected applications with e-Infrastructure and maintenance on production level**

➢ **Adaptation of e-Infrastructure across selected areas of science and engineering**
  ➢ Step forward in accessing scientific instruments
  ➢ combine the experimental science community and its research facilities with the support given by e-Infrastructure

➢ **Deployment and operation of persistent, production quality, distributed instrumentation integrated with e-Infrastructure**
  ➢ to provide added values of e-Infrastructure in the integrated environment of scientific and engineering instrumentation, networking, visualisation and computational infrastructures

➢ **Generalize and deploy a framework environment that can be used for fast prototyping**
  ➢ to use expertise and demands collected from various groups/owners of scientific instrumentation
  ➢ to integrate selected functionalities from infrastructure and IST-oriented projects

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Work plan outline

➢ **Feb. 1st, 2008** + 30 months (INFRA, call no. 1)

➢ We deal with group of scientific users, with experimental equipment and instrumentation that are **not integrated** or integrated **only partially** with the European infrastructure
  ➢ earthquake community, with various sensor networks
  ➢ environmental science community
  ➢ experimental science community, with synchrotron and free electron lasers.

➢ Collecting **initial requirements** (users, technology providers, SME)

➢ The hardware and software technology we plan to use will be incorporated mainly from the following EC projects:
  ➢ RINGrid, GRIDCC, Int.EU.Grid, g-Eclipse, and national projects (CRIMSON, VLAB)
  ➢ Is based on development from EGEE2 and GN2.

➢ Provide advanced applications and capabilities to more researchers, capturing commonalities, fostering interoperability, promoting open standards and federating approaches across disciplines

➢ Their daily activities will benefit greatly after the integration with e-Infrastructure

➢ And even more... Deploying the results to a wider community outside the project
  ➢ **MOON** (Mediterranean Ocean Observing Network),
    ➢ European organisation EuroGOOS
  ➢ **ECOHYDROS – represents the industry area (SME)**

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Standards related work

➢ **Goals:**
  ➢ **To generalize and deploy a framework environment that can be used for fast prototyping**
  ➢ **Challenging testbed including real end users**

➢ **Strong need for continuation of already started activities (worldwide importance)**
  ➢ **INGRID** – conference (planned as annual event, exchange forum)

  ➢ Research group at OGF – RISGE - **Remote Instrumentation Services in Grid Environment**
    ➢ **to explore issues related to the usage of advanced Grid capabilities in the process of monitoring as well as execution of measurement tasks and experiments on complex remote scientific equipment**
    ➢ **to integrate approaches in defining remote access interfaces to sophisticated laboratory equipment in e-Infrastructure environments**
    ➢ **it concerns steering, monitoring and user access to unique instruments**
    ➢ **the advances of Grid technologies in areas such as interactivity and visualization will play and important role in the process of accessing remote devices**

➢ **We will promote standardisation and knowledge transfer via e-IRG and OGF research groups**

5 ➢ **Co-operation between projects**

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DORII:
http://www.dorii.eu

Conference:
http://www.ingrid.cnit.it

INGRID 2008
INSTRUMENTING THE GRID
Lacco Ameno, Island of Ischia, ITALY
APRIL 9-11, 2008

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