



EUChinaGRID: a year of successful collaboration in Grids

The first project year is finished and EUChinaGRID has successfully got through the 1st year project review on last 27 February.

The review, held in conjunction with the ones of two "sister projects", EUMEDGRID (<http://www.eumedgrid.org/>) and EELA (<http://eu-eela.org/>), was held in Madrid at the premises of CIEMAT, the EELA coordinator, and was followed by an international Conference on eScience. Project reviews are a major event in the life of a European project, as they can provide useful feedback and recommendations and even decision of the project's future: in fact, in case the technical and/or financial management is deemed inappropriate, funding can be suspended, together with the project work.

During the review, the Project Manager, Dr. Federico Ruggieri, the Technical Manager, Dr. Giuseppe Andronico presented the progresses of the project during the first year, highlighting the most significant achievements; the Workpackage managers, Gabriella Paolini (WP2, Network planning and interoperability), Andrea Chierici (WP3, Grid infrastructure), Fabio Polticelli (WP4, Applications) and Federica Tanlongo (WP5, Dissemination) discussed then more specific aspects of their work.

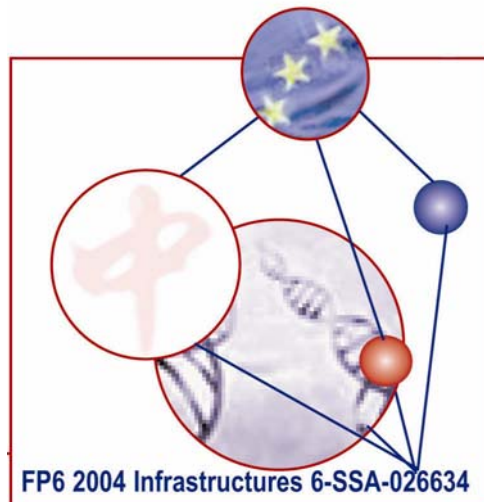
Two online demonstrations, about GOS-gLite jobs interoperability and the Early/Late stage biological application were showcased respectively by Yongjian Wang of Beihang University and Marek Kochanczyk from Jagellonian University.

The reviewers, who are international experts of the domain selected by the EC in order to assess the project activities and achievements and evaluate the performance of the EUChinaGRID team, asked the speakers further questions in order to better understand the most important aspects and clarify strategic issues.

A complete agenda of the review, including all presentations by the project staff is available online at:

<https://agenda.euchinagrid.org/conferenceDisplay.py?confId=10>.

In the last few days, the official report from the reviewers has reached the Project Management. In the overall, the outcome is more than satisfactory and shows that the importance and quality of the works performed by the EUChinaGRID staff has been positively evaluated. In particular, in the document the reviewers highlight the strategic importance of cooperation between EU and China in such an emerging field and the pioneering work done by the EUChinaGRID team in the field of interoperability.



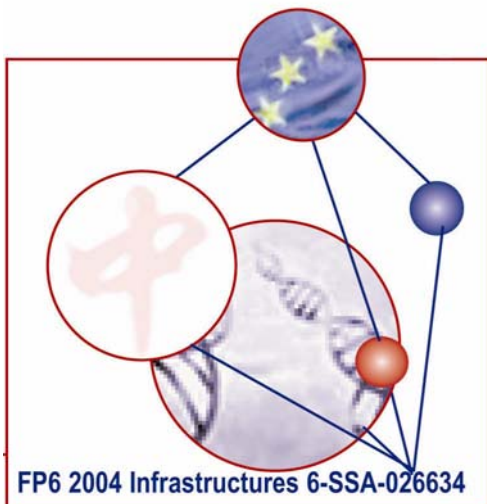


On the other hand, certain areas were identified in which the project could and should improve, which will be of course addressed in the proceeding of the works.



EUChinaGRID, short name for "Interconnection and Interoperability of Grids between Europe and China", aims to interconnect the existing European (EGEE) and Chinese (CNGrid) infrastructure, to enable their interoperability, to deploy existing and new Grid applications and to disseminate advanced knowledge in Grid technologies to foster and strengthen the collaboration between

both regions. EC reviewers considered such undertaking of strategic importance to the European Union as it paves the way towards future cooperative research projects for new powerful tools and services and a wider exchange of expertise between European and Chinese scientific communities.



Some technical achievements and ongoing works were especially appreciated: amongst those, it is worth mentioning the triggering towards the development of an interoperable middleware and of common computing and storage resources within the perspective of an Euro-Asiatic unified infrastructure for eScience and the dissemination and training activity aiming at creating a Euro-Chinese grid community interested and capable to exploit the infrastructure.

Establishing a "web of trust" that brings the right mixture of human capital together is a key priority for expanding e-Infrastructures, as it constitutes the foundation for the



supporting actions to be built upon. Having a targeted and committed end-user community is invaluable for the sustainable usage of grid services.

1st year progresses in brief

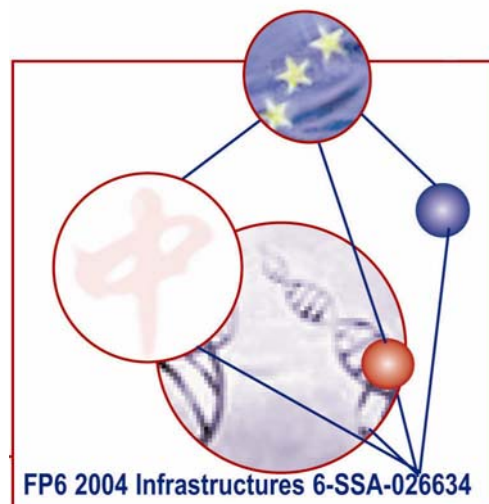
The pilot infrastructure was started well ahead of the foreseen plans and already includes 9 sites (2 in China) and the 10th site (Peking University) is about to join. All the relevant Grid services were started and are maintained to facilitate the access of users and Virtual Organizations (VO) through the web portal (www.euchinagrid.eu).

A special stress was posed on designing an e-Infrastructure allowing full interoperability, both horizontally (i.e. between European and Chinese middleware) and vertically (i.e. between Grid middleware and the different versions of the IP protocol). The impact of achieving both interoperabilities is far beyond the scope of the project itself, as the former implies the possibility for European and Chinese e-Infrastructures to work effectively together, while the latter allows the deployment of grid nodes in an IPv6 environment. Although at the moment the IPv6 protocol is not widely used for grid purposes, such applications could indeed take advantage from some features; furthermore, the deployment of the first double-stack Grid nodes has proved to be useful in order to overcome IPv4 bottlenecks and give resilience to the e-Infrastructure.

Works towards both objectives are well on and the first EUChinaGRID findings in this field raised interest amongst middleware developers.

Application deployment is also well advanced in several science fields: High Energy experiments (ATLAS and CMS) at the CERN Large Hadron Collider (LHC) has already run their applications on the pilot infrastructure; the Astroparticle experiment ARGO-YBJ, a joint collaboration between Chinese and Italian researchers, is currently collecting data on Cosmic Ray showers in the YangBaJing laboratory in Tibet; a complete system has been deployed to perform the data transfer from YangBaJing to IHEP (Beijing) and INFN-CNAF (Bologna) sites, using Grid Middleware and the t-Infrastructure GILDA.

EUChinaGRID also supports Biological applications in the field of simulation and discovery of new proteins. The work in this field, carried out in the laboratories of Biology Department of University of Roma Tre (UROM3), Jagiellonian University Medical College (JU-MC) and Peking University (PKU), led to first *ab-initio*





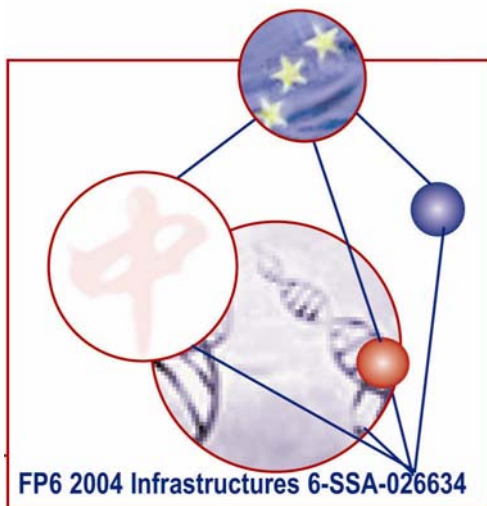
protein structure prediction processes ever deployed in a Grid environment. The parallel approaches adopted by UROM3 and JU-MC will be compared on a large sample of candidates, while the predicted protein structures will be experimentally verified by the PKU group.

During the last quarter of 2006 EUCINA GRID project also supported the WISDOM Data Challenge with significant computing resources. This virtual screening challenge of the international WISDOM (World-wide In Silico Docking On Malaria) initiative started on 1 October 2006 and targeted compounds of interest for drug discovery against neglected diseases.

EUCINA GRID had an intense dissemination activity with a website in both English and Chinese (more than 150 pages), which reached 1000 monthly visits at the end of the first year of the project, the presence at 16 major Grid and e-Infrastructure worldwide events and several events organized during the first year in China and in Europe. In particular, 5 tutorial events were held with 231 trained people. More than 100 Chinese researchers, engineers and students took part in the advanced knowledge tutorials held in Beijing and many of them became vehicles of further dissemination of Grid knowledge in their organizations.

Some areas to be enhanced in order to fully achieve the project objectives were identified and will be addressed with focused works in the next few months. These include the long-term sustainability of the initiative (mainly by raising awareness and involving governments, funding bodies and the commercial world), a closer collaboration with the CNGRID initiative and further works in middleware and IP-version interoperability.

It is envisaged that the project will strengthen the liaison activities and the participation in world standardization efforts (Global Grid Forum, etc.).



To learn more about the **EUChinaGRID** project visit:
<http://www.euchinagrid.eu>
 You may receive this newsletter and other information about the **EUChinaGRID** project and initiative in your email contacting:
po@euchinagrid.org