



H Interconnection & Interoperability of Grids between Europe & China H

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**PROJECT TITLE: INTERCONNECTION &  
INTEROPERABILITY OF GRIDS  
BETWEEN EUROPE AND CHINA**

**INSTRUMENT: SPECIFIC SUPPORT ACTION  
ACTIVITY: RESEARCH INFRASTRUCTURES**

## **D 5.1 - PROJECT PRESENTATION**

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CO	Confidential, only for members of the consortium (including the Commission Services)	

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**Abstract:** This deliverable provides general information about the EUChinaGRID project; it comprises some project facts and contacts, as summarized in the project information sheet (downloadable at: <http://www.euchinagrid.org/docs/EUChinaGRID-Project-Presentation.pdf>). Furthermore, the document describes the project website (<http://www.euchinagrid.org>) and others online tool for dissemination and communication and a complete set of project templates, to be used in the preparation of public documents and presentations.

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## 1. INTRODUCTION

### *1.1. PURPOSE OF THE DOCUMENT*

The document is intended to provide general information about the EUChinaGRID project, including the project structure, aims, key roles and contacts.

### *1.2. APPLICATION AREA*

This document mainly targets all people who are involved in the project, such as Partners and Third Parties staff members, project contributors, users etc. It also addresses the European Commission (EC) and any actor which may be interested in the project (i.e., for example, related projects, governments and funding bodies, potential sponsors, institutions or research groups interested in joining the user base).

### 1.3. REFERENCES

[R1] Project website	<a href="http://www.euchinagrid.org/">http://www.euchinagrid.org/</a>
[R2] Project leaflet	<a href="http://www.euchinagrid.org/docs/EUChinaGRID-Project-Presentation.pdf">http://www.euchinagrid.org/docs/EUChinaGRID-Project-Presentation.pdf</a>
[R3] Project templates kit	<a href="http://www.euchinagrid.org/docs/EUChinaGRID-doctemplates.zip">http://www.euchinagrid.org/docs/EUChinaGRID-doctemplates.zip</a>
[R4] EGEE website	<a href="http://public.eu-egee.org/">http://public.eu-egee.org/</a>
[R5] CNGrid website	<a href="http://www.cngrid.org/">http://www.cngrid.org/</a>
[R6] EC infrastructures website	<a href="http://www.einfrastructures.org/">http://www.einfrastructures.org/</a>
[R7] CORDIS website	<a href="http://www.cordis.lu/ist/home.html">http://www.cordis.lu/ist/home.html</a>
[R8] GEANT2 website	<a href="http://www.geant2.net/">http://www.geant2.net/</a>
[R9] LCG webpage	<a href="http://www.cern.ch/lcg/">http://www.cern.ch/lcg/</a>
[R10] gLite webpage	<a href="http://www.glite.org">http://www.glite.org</a>
[R11] GILDA	<a href="https://glida.ct.infn.it/">https://glida.ct.infn.it/</a>

### 1.4. DOCUMENT AMENDMENT PROCEDURE

In order to amend the document, please contact the Project Office at: [po@euchinagrid.org](mailto:po@euchinagrid.org).

### 1.5. TERMINOLOGY

#### Glossary

<b>CA</b>	Acronym for Certification Authority.
<b>CNGrid</b>	Acronym for China National Grid, the Chinese national testbed for the new generation of information.
<b>Cluster</b>	The term describes a cluster is a group of machines that are networked together and used as a single unit to run parallel programs.
<b>EGEE</b>	Enabling Grids for e-Science
<b>Grid</b>	The term designates a distributed infrastructure of computation and storage resources, which can be used by a VO in a transparent way (i.e. without need to know about the location of the resources etc).
<b>GILDA</b>	Grid INFN Laboratory for dissemination activities
<b>gLite</b>	Codename of the Middleware software suite developed by EGEE JRA1.

<i>Globus</i>	“Globus Toolkit” is the name of all software components for Grid Computing platforms available under an open-source license from the consortium Globus Alliance.
<i>GridICE</i>	Distributed monitoring tool designed for Grid systems.
<i>GStat</i>	Code for multivariable geostatistical modelling, prediction and simulation, widely adopted within EGEE in order to provide statistics about pilot sites installations.
<i>LCG</i>	Large Hadron Collider (LHC) Computing Grid
<i>Middleware</i>	Generic terms defining a communications layer that allows applications to interact across hardware and network environments.
<i>NGI</i>	National Grid Initiative
<i>ROC</i>	Regional Operation Centre
<i>VO</i>	Virtual Organization: a Virtual Organization can be defined as geographically dispersed group of collaborating scientists.

## 2. EXECUTIVE SUMMARY

This document provides general information intended to present and disseminate the EUChinaGRID project and its management to the public; such information includes: a brief project summary, including facts such as start and end date, duration, EC funding, etc; project partners, third parties and contributors; project workpackages, project management structure, roles and contacts; state of the art and current Grid infrastructure between Europe and China.

It also describes project communication strategies and tools, describing the first information materials created for this purpose, comprising the project information sheet, which is available for download on the project website, at the following URL: <http://www.euchinagrid.org/docs/EUChinaGRID-Project-Presentation.pdf>; the document describes the project website (<http://www.euchinagrid.org>) and others online tools, such as the project agenda, document server, monitoring and statistic tools, mailing lists and weblog etc; it also accounts for and provides a copy of the project document templates kit. This is a complete set of templates, stylesheets and official logos/graphical elements that project partners are required to use when producing any document relating to EUChinaGRID, in order to maintain a consistent look-and-feel for each document, as well as a standard in the information architecture.

A copy of the Project presentation leaflet and of the project templates kit are attached to this deliverable as annexes 1 and 2.

### 3. PROJECT PRESENTATION

#### 3.1. THE PROJECT IN BRIEF

The EUChinaGRID Project aims to support the interoperability of the Grid infrastructures in Europe and China for the benefit of eScience applications.

*Start date:* January 1st 2006

*End date:* December 31st 2007

*Total expected budget:* 1,995,000

*Max EC contribution:* 1,299,998

*Total foreseen effort:* 495 Person Months

*Total foreseen EC-funded effort:* 325 Person Months

*Coordinator:* INFN - The National Institute of Nuclear Physics (Italy)

*Project Partners & Third Parties:* Beihang University, Computer Network Information Center – Chinese Academy of Sciences, Institute of High Energy Physics – Chinese Academy of Sciences, Peking University, Greek Research and Technology Network, Consortium GARR, Department of Biology - Università di Roma Tre, Jagiellonian University Medical College, CERN, Academia Sinica Grid Computing Centre.

*Contacts:*

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- Giuseppe Andronico (Technical Manager), [giuseppe.andronico@ct.infn.it](mailto:giuseppe.andronico@ct.infn.it);
- Federica Tanlongo (Project Officer), [federica.tanlongo@garr.it](mailto:federica.tanlongo@garr.it).

*Contact email:* [po@euchinagrid.org](mailto:po@euchinagrid.org)

#### 3.2. PROJECT SUMMARY

EUChinaGRID will provide specific support actions to foster the integration and interoperability of the Grid infrastructures in Europe (EGEE) and China (CNGrid) for the benefit of eScience applications and worldwide Grid initiatives, in line with the support of the intercontinental extension of the European Research Area (ERA).

The project will study and support the extension of a pilot intercontinental infrastructure using the EGEE-supported applications and will promote the migration of new applications on the Grid infrastructures in Europe and China by training new user communities and supporting the adoption of grid tools and services for scientific applications.

A first set of existing Euro-Chinese collaborations in research, marked by strong requirements in terms of analysis of large quantities of data and needs for wide

amounts of computing power, were already selected as pilot applications in order to validate the infrastructure. The first result of EUChinaGRID will be therefore to facilitate the exchange and processing of scientific data: all the pilot applications, will immediately take advantage of the new Grid infrastructure and services, providing in the meanwhile a proof-of-principle approach to validate the EUChinaGRID infrastructure. These Grid aware applications, together with the dissemination activities will be the driving force promoting the migration of new applications on the EUChinaGRID Infrastructure. A key point for the success of the initiative will be the dissemination and training, addressed to improve the accessibility of the Grid infrastructure for new applications and user communities, thus promoting scientific and industrial development and creating a human network in eScience.

EUChinaGRID will exploit the already available middleware developed within other Grid projects like EGEE and make use of established common practices in the deployment of such large infrastructures. By achieving the interoperability of the wider European and Chinese infrastructures, EUChinaGRID will provide the international research and education community with transparent access to a worldwide amount of storage and computing resources larger than currently available in separate environments.

### 3.3. PROJECT OBJECTIVES

The objectives of the project can be divided in two main areas: contributing to the creation of an eScience community, and supporting an interoperable infrastructure that will enable the Grid operations between Europe and China.

*01:* To promote the creation of a human network in the area of Grids, eScience and eInfrastructures between Europe and China.

*02:* To disseminate in China the results of successful European Grid infrastructures, like EGEE, and compare such results with the CNGRID experience.

*03:* To support the interoperability of existing European and Chinese Grid infrastructures, towards the creation of a “virtual Grid-based research space” for eScience, in an integrated multi-protocol (IPv4/IPv6) environment.

*04:* To exploit the existing and planned infrastructure provided by the research networks like GEANT2 and the initiatives of high-speed intercontinental connections, such as TEIN2 and ORIENT.

*05:* To foster interoperability of solutions across different disciplines to achieve broader scale uptake of Grid technology across user communities, involving as pilot applications those producing and processing large amounts of scientific data, such as Astroparticle Physics, Biology and High Energy Physics.

*O6:* To harmonize European and Chinese eScience requirements in terms of resources needed, Grid services and application software and provide recommendations to adapt the present best practices, policies and tools.

### 3.4. PROJECT'S STARTING POINTS

*Current grid environments and applications in Europe and China:* Both in Europe and China, advanced Grid infrastructures (i.e. respectively EGEE and CNGrid) are now operating and a large number of applications have already approached Grid Technology; especially, these are scientific applications with very demanding requirements in term of data processing and/or storage. The EUChinaGRID will build upon the experience gained in EGEE and CNGRID and exploit their current solutions as regards to middleware and applications; the initiative will as well address the current and potential user base.

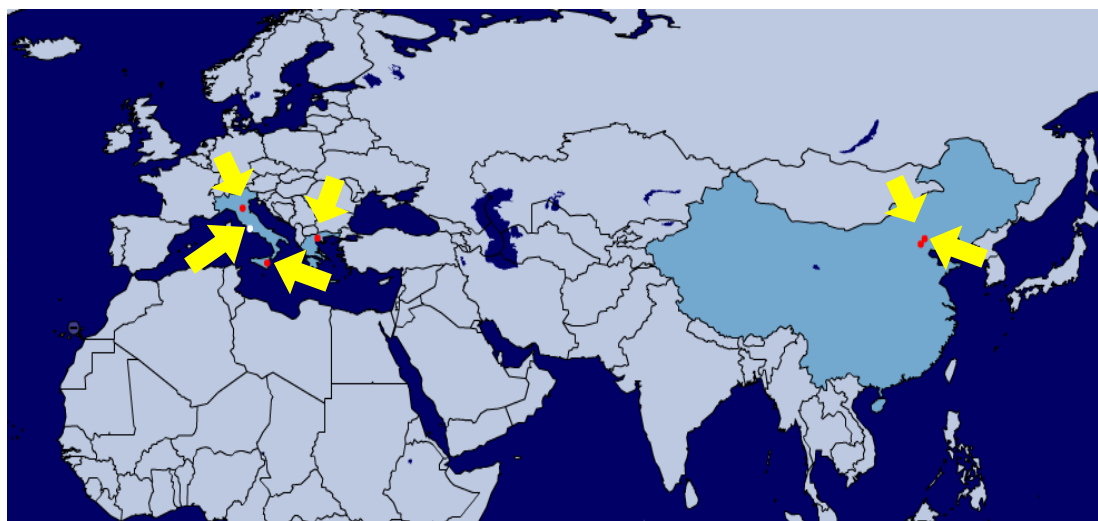
gLite/LCG, the latest version of the EGEE middleware is deployed on a large amount of sites across Europe, grouped in several national/regional grids and federated in a European wide infrastructure. A number of user communities have already ported their own applications on the EGEE: currently, several scientific application fields are here represented, i.e. Physics, Biomedicine, Earth Science, Astrophysics, Computational Chemistry etc.

CNGrid, the China National Grid initiative, is a test-bed for the new-generation information infrastructure, aiming to integrate geographically distributed heterogeneous supercomputers, clusters, storage facilities, and scientific instruments. CNGrid is based upon a set of grid software developed by the key project, the grid operation system (GOS) and it currently supports a number of applications including the Resource and Environment, Meteorology, Geology, Computational Chemistry and Pharmacology, Education, Logistics, Services and Manufacturing application fields.

*Selected pilot applications:* A first set of already operating applications, qualified by an existing/in progress Euro-Chinese collaboration, were selected as pilot applications in order to validate the EUChinaGRID infrastructure:

- *ARGO-YBJ (Cosmic Ray Experiment):* the experiment, located in Yangbajing – Tibet (P.R. China), is already taking remarkable amounts of data and will reach the full configuration by mid 2006. Its results are of importance for a large worldwide community related to the investigation of the Gamma Ray Bursts (GRB): nowadays several hundreds Gigabytes of data are exchanged via hand-delivered magnetic tape cartridges. Grid technology, combined with network connectivity in the order of Gigabits, will therefore dramatically improve the efficiency of the data transfer and the coordinated analysis of those large quantities of data between Europe and China.

- *Never Born Proteins (Computational biology application)*: the NBP computational approach aims to study a large library ( $10^9$  sequences) of the so-called “Never Born Proteins”, i.e. proteins that, although having a possible peptide configuration, never actually existed, in order to clarify the structural principles that characterize them and to select a reasonable number of sequences which can potentially give rise to stably folded proteins. Such computing methods are presently independently developed and run by several groups of Biologists in Europe and in China and a larger community is interested in the experimental study of the selected candidate sequences that will then be expressed and characterized experimentally.



**Figure 1 - Locations of already operating EUChinaGRID pilot site installations**

*First Pilot Site installations*: a few sites in Europe and China are operating and linked from the very beginning of the project and can be regarded as the initial steps towards the creation of a wider EUChinaGRID infrastructure.

- BEIJING-CNIC-LCG2-IA64 (Beijing – P.R. China)
- BEIJING-LCG2 (Beijing – P.R. China)
- GR-01-AUTH (Athens – Greece)
- INFN-CATANIA (Catania – Italy)
- INFN-CNAF (Bologna – Italy)
- INFN-ROMA3 (Rome – Italy)

An online monitoring service is already available for these pilot installations at the URL: <http://euchina-gridice.cnaf.infn.it:50080/gridice/site/site.php>

### 3.5. PROJECT ACTIVITIES

The Project works split in 5 workpackages, each of whom tackles some specific issues and includes several activities.

*WP1 - Project administrative and technical management:* This Workpackage addresses all management, administrative and technical issues of the project as well as liaisons with other initiatives, which are relevant for the EUChinaGRID scope (i.e. Europe-China Connectivity projects, international and regional Grid initiatives, grid-related dissemination initiatives etc.). The Workpackage splits in three activities:

A1.1: Administrative management

A1.2: Technical management

A1.3: Liaisons with related projects

*WP2 - Network planning and interoperability study:* This Workpackage is responsible for carrying out studies on available and foreseen network connectivity and promoting the implementation of new high bandwidth links between Europe and China or Asia in general. Moreover, the Workpackage will perform study in Grid Middleware available on IPv6 networks and in the interaction between Grid Services and IPv4-IPv6 communication, providing feedbacks and advices on possible improvement of the middleware code to developers (EGEE, Globus, etc.). The Workpackage includes two separate tasks:

A2.1: Network connectivity plan

A2.2: Analysis of multi-protocols Grid connectivity

*WP3 - Pilot infrastructure operational support:* The activity within the Workpackage focuses on carrying out studies on CNGrid and EGEE interoperability, defining common security policies and proposing deploying solutions for advanced services. In this context, the promotion of the interconnection of new interoperable infrastructure with other (pre-existing or induced) Asian grids will be especially stressed. The Workpackage is divided in four activities:

A3.1: CNGrid and EGEE interoperability

A3.2: Certification authority setup & operations

A3.3: Operational support on advanced services

A3.4: Promote new Asian Grid Infrastructures

*WP4 - Applications:* The Workpackage is intended to validate the Intercontinental Infrastructure using EGEE-enabled applications and to facilitate porting of new applications relevant for the eScience and Industrial collaboration between Europe and China. The activities within the Workpackage are divided in three application fields:

A4.1: EGEE Applications

A4.2: Astroparticle Physics applications

A4.3: Biology applications

*WP5 – Dissemination:* The Workpackage aims to enlarge awareness of grid computing and promote the development of National Grid Initiatives collaborating with European grid efforts. A key element in this context will be the dissemination of advanced knowledge, to train newcomers into smart users and spread know-how among the technical personnel involved. Such training will be delivered both by means of workshops and courses and trough eLearning, thanks to the GILDA facility. The Workpackages activities are the following:

A5.1: Project dissemination activities

A5.2: Dissemination of advanced knowledge activities

A5.3: Promoting new communities

### 3.6. PROJECT MILESTONES AND DELIVERABLES

Several milestones will mark the progress of works and the most significant achievements will be reported in the Project deliverables (as specified in the Technical Annex to the Contract and shown in the following tables). The status of Milestones and deliverable can be checked on the project website, at the URLs:

<http://www.euchinagrid.org/milestones.html> for milestones and

<http://www.euchinagrid.org/deliverable.html> for deliverables.

These pages are maintained by the Project Office and contain all related information about the documents (such as related links, versions, link to the document itself, etc.) and will be kept constantly up-to-date.

Milestone n°	Milestone Title	WP	Deadline
M1.1	Kick-off meeting and project presentation	WP1	Pm1
M5.1	Initial public web site	WP5	Pm2
M5.2	Initial setup of dissemination material	WP5	Pm6
M2.1	Initial studies of end-to-end Network connectivity to China/Asia	WP2	Pm7
M3.1	Policies and Certification Authority check	WP3	Pm8
M2.2	Initial studies of IPv4-IPv6 and IPv6-Grid middleware interoperability	WP2	Pm9
M5.3	First revision of dissemination materials	WP5	Pm12
M1.2	First Project Conference	WP1	Pm12
M3.2	First studies on Pilot Grid Services interoperability	WP3	Pm12

M3.3	Operational support of advanced services achieved	WP3	Pm16
M4.1	Selected applications running on the intercontinental infrastructure	WP4	Pm19
M1.3	Second Project Conference	WP1	Pm24

**Table 1 – EUChinaGRID milestones**

Del. n°	Del. Title	WP	Leader	Due on
D5.1	Project Presentation	WP5	INFN	Pm1
D5.2	Dissemination and Outreach plan	WP5	INFN	Pm4
D3.1	State-of-the-art in Security and Certification Authority preliminary report	WP3	GRNET	Pm4
D4.1	Specification and Requirements of applications	WP4	UROM3	Pm4
D2.1	Status and perspectives of Network connectivity to Asia	WP2	GARR	Pm5
D2.2	Initial interoperability report	WP2	GARR	Pm9
D4.2	Integration of applications on the GILDA facility	WP4	INFN	Pm9
D3.2	Guidelines for CA and RA procedures and for best practices	WP3	GRNET	Pm10
D5.3	Intermediate report, with plan update, on outreach and dissemination activities	WP5	INFN	Pm12
D4.3	First validation report using EGEE applications	WP4	IHEP	Pm17
D4.4	Final Applications analysis report	WP4	JUMC	Pm24
D2.3	Final Interoperability report	WP2	GARR	Pm24
D3.3	CNGrid and EGEE interoperability report	WP3	BUAA	Pm24
D1.1	Final plan for using and disseminating knowledge	WP1	INFN	Pm24
D5.4	Report on raising public participation and awareness	WP5	GARR	Pm24

**Table 2 – EUChinaGRID deliverables**

*Deliverables' quality insurance procedures:* Each official EU deliverable must fulfil certain format requirements and quality criterions, including:

- Compliance with the standard format
- Coherence of content
- Exhaustiveness and technical correctness of information

A standard format has been fixed for each of the document types, as described below (see... paragraph "...".)

In order to make sure that it complies with the project quality assurance policies, each document will be submitted to:

- A first technical review within the Activity to whom it belongs;
- A formal review by the PO, which will assess its consistence with the project objectives and compliance with the above-mentioned format and publication rules. The PO-reviewed version will then be delivered to TB, together with a standard Dialog Form Template filled in with any changes possibly made on the document;
- A final review of the technical contents to be performed by the TB. The TB will deliver the updated version and Dialog Form to the WP Manager and the PO. Once included all modifications listed in the Form, the final version of the deliverable is submitted to the EC

## 4. PARTICIPANTS

### 4.1. COORDINATOR

*The National Institute of Nuclear Physics*, (INFN, <http://www.infn.it/>) is the organization promoting, coordinating and operating in Italy scientific Research in the fields of sub-nuclear, nuclear and astroparticle Physics and the technological development needed to carry out such activities. INFN has achieved a large experience in Grids and is currently one of the leading organizations at the national level. The INFNGrid project, started in 1999, developed the first Italian Grid, based on GARR, the Italian research network. At European level, INFN was in 2001 one of the main partners of the largest FP5 European grid project, DataGrid, and was actively involved in a number of projects, such as DataTAG, LCG, EGEE, EGEE2, EUMEDGRID and EELA. INFN will act as the coordinating party of EUChinaGRID and will be deeply involved in all project activities.

### 4.2. PROJECT PARTNERS & THIRD PARTIES

*Beihang University* (BUAA - <http://ev.buaa.edu.cn/>), founded in 1952, is one of the key universities in China. The Computer School of Beihang University is ranked at top 5 among all Chinese universities. There is a national key laboratory on software development environment in this school. In the past few years Beihang University has been very active in research on Grid technology, especially in grid software and grid infrastructure, and been involved in several national projects on Grid.

*Consortium GARR* (GARR - <http://www.garr.it/>) is a Consortium established by the major Italian Research Organizations with the mission to implement, operate and widen the National high-speed telecommunication network for Research and Education. The GARR Network provides students, teachers and researchers with location-independent services, fostering collaboration in national and international research activities and supporting the growth of advanced technologies and new services. GARR is the leader of WP2 and WP5 and acts as Project Office in close collaboration with the Coordinator.

*The Computer Network Information Center* (CNIC - <http://www.cnic.cn/>) is a subsidiary research institute of the Chinese Academy of Sciences (CAS), engaged mainly in the construction, operation and supporting service of Informatization of CAS, R&D of computer network technology, database technology as well as scientific engineering computation. CNIC runs CSTNET, which is one of two major academic networks in China. CNIC participates in WP2, WP3, WP4, and WP5 in EUChinaGRID.

*The European Organisation for Nuclear Research* (CERN, <http://www.cern.ch/>), funded by 20 European nations, is constructing a new particle accelerator on the Swiss-French

border on the outskirts of Geneva. When it begins operation in 2007, this machine, the Large Hadron Collider (LHC), will be the most powerful machine of its type in the world, providing research facilities for several thousand High Energy Physics (HEP) researchers from all over the world. CERN is the Coordinator of the largest European Grid Infrastructure project: EGEE.

*The Greek Research and Technology Network* (GRNET - <http://www.grnet.gr/>) operates under the auspices of the Ministry of Development and supports the research and development of Information and Communication Technologies within Greece and internationally, through the provision of its high-capacity networking and grid computing infrastructure. GRNET's networking infrastructure serves as the foundation for advanced computing applications, taking advantage of the processing/storage clusters managed by the HellasGrid project. GRNET is the coordinator of the SEE Federation of EGEE and the project coordinator of the SEE-GRID project. In EUChinaGRID, GRNET is involved in security aspects of WP3, as well as contributes to the networking plan in WP2 and dissemination and training activities in WP5

*The Institute of High Energy Physics* (IHEP - <http://www.ihep.ac.cn/>), founded in 1973, is the leading high-energy physics laboratory in China. The Institute is involved in high-energy physics, cosmic ray physics, accelerator physics and technologies, radiation technologies and applications, with collaborations with institutes and universities in the country as well as in the world. IHEP is staffed with about 1000 people, including over 650 physicists and engineers and is building a regional data center using LCG software to provide computing services to LHC, ARGO and BES projects. IHEP will participate in WP2, WP3, WP4 and WP5.

*The Jagiellonian University Medical College* (JUCM – <http://www.cm-uj.krakow.pl/>), Poland's oldest university, owes its exceptional position both to a tradition stretching back over six hundred years and its significant present-day achievements. Department of Bioinformatics and Telemedicine ([www.bit.cm-uj.krakow.pl](http://www.bit.cm-uj.krakow.pl/)) is engaged into the development of modern bioinformatics tools oriented on protein folding, computer aided drug design. The statistical analysis of medical data and the development of virtual laboratories, introduction of clinical path as E-learning in medicine as well is in spectrum of its activity in telemedicine. The JUCM's team will be mainly involved in WP4 activities.

*Peking University* (PKU - <http://en.pku.edu.cn/>) has been ranked as one of the top and most prestigious universities in China for many decades. Two groups in PKU are participating in EUChinaGRID pertaining to different disciplines of sciences: Biology and Physics. The Beijing Nuclear Magnetic Resonance Center (BNMRC) is a national center for bio-molecular structural studies in China located at PKU; this group will work on WP4.3 to make use of new grid technology to enhance the quality

of Never-Born-Protein (NBP) applications. The high-energy physics group in PKU has participated in the CMS experiment on LHC at CERN since 10 year ago; it will work on WP4.1 to use the computing grid on the huge amount of Monte-Carlo event generation and data analysis. Both groups shall also work on WP5.

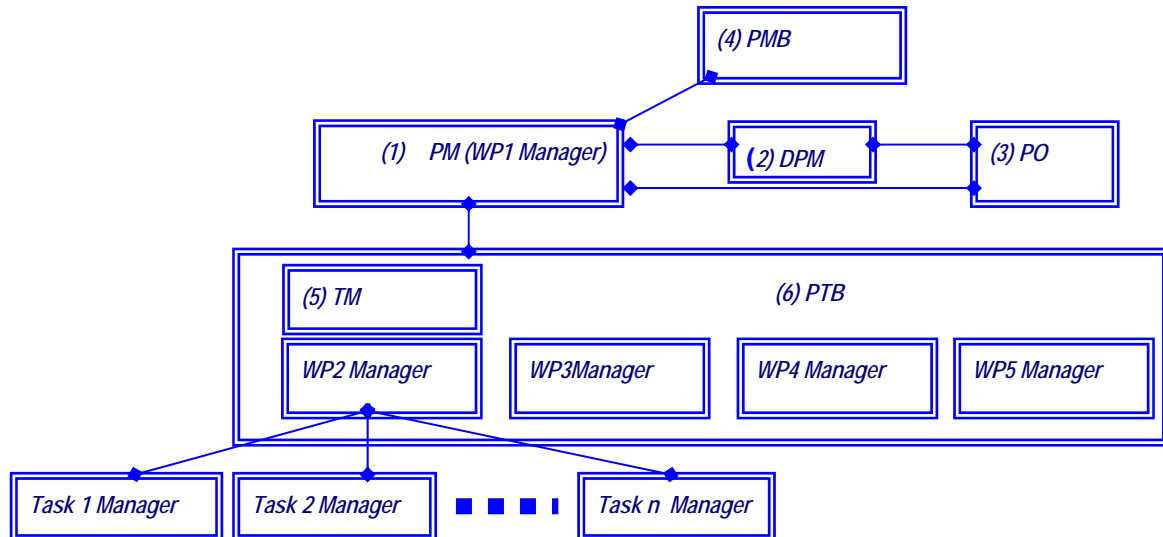
*The University of Roma Tre* (<http://www.uniroma3.it/>) has been established in 1992. Though it is the "youngest" public university in Rome it counts a total number of students of 40000. The University is made up of 8 different faculties and 26 departments. The Science Faculty includes 4 departments (Biology, Earth Sciences, Mathematics and Physics) in which teaching and research activities are highly intertwined. The Department of Biology has 34 faculty members whose research activity ranges from botany and zoology to molecular, cellular and structural biology. The University of Roma Tre plays a central role in the urbanistic and cultural development of the city also through the organization of meetings and cultural events with the participation of high profile personalities in science and society. The Departments of Biology and Physics will be both involved in the project: the former will have a leading role in WP4, while the latter will be involved in the same Workpackage as a Third Party, dealing with issues related to the Astroparticle Physics applications.

*Academia Sinica Grid Computing Centre* (ASGC - <http://www.twgrid.org/>) is one of leading high performance computing and communication centres in Taiwan, which provides Grid-based infrastructure, service, and e-Science application development for Academia Sinica and its collaborating institutes. ASGC is acting as the LCG Tier-1 centre and also the coordinator of Asia Pacific Federation for the extension of EGEE infrastructure and applications. Acting as the Asia Pacific Regional Operation Centre (APROC) and Global Grid User Support (GGUS), the ASGC not only facilitates LCG/EGEE CA and operation services, but also provides Grid-related training courses and symposia to other Asian Pacific countries. ASGC joins EUChinaGRID Project as a third-party partner related to CERN, and will participate to WP2, WP3, WP4, and WP5.

## 5. MANAGEMENT STRUCTURE AND CONTACTS

The Project management structure, schematically shown in the picture below, is based on:

- A Project Manager (PM), nominated by the coordinator in order to run the Project and supervise all strategic and management activities/issues.
- A Project Office (PO), jointly managed by GARR and the coordinating partner, whose mission will be to support the PM in his job.
- A Project Management Board (PMB), composed by one representative per Partner (with voting rights), plus the TM and at least one PO member (as non-voting members), which will meet periodically and address the major contractual and strategic issues.
- A Technical Manager (TM), proposed by the PM and ratified by the PMB, who is responsible of all technical aspects of the project and leads the Technical Board.
- A Technical Board (TB), including all Work Package (WP) Managers, whose aim is to coordinate the Technical Activities within the Project.



**Figure 2 – A schema of the Management structure**

The appointment of a deputy for each of the above-mentioned roles will facilitate the works. As a general rule, if a leader is from EU, his/her deputy will be, whenever possible, from China and vice-versa. This rule is meant to harmonize the division of works among partners and guarantee to each project participant a “close” first point of reference in case of doubts, requests etc.

In the following table, personnel appointments (ratified during the first PMB meeting, held in Athens on 24/01/2006) for each role are shown, as well as the contact email addresses. Appointed Activity leaders are shown as well.

Project Manager	Federico Ruggieri, <a href="mailto:federico.ruggieri@roma3.infn.it">federico.ruggieri@roma3.infn.it</a>	INFN
Deputy Project Manager	Gang Chen, <a href="mailto:gang.chen@ihep.ac.cn">gang.chen@ihep.ac.cn</a>	IHEP
Chairman of the Project Management Board	Gang Chen, <a href="mailto:gang.chen@ihep.ac.cn">gang.chen@ihep.ac.cn</a>	IHEP
Technical Manager	Giuseppe Andronico, <a href="mailto:giuseppe.andronico@ct.infn.it">giuseppe.andronico@ct.infn.it</a>	INFN
Project Officer	Federica Tanlongo, <a href="mailto:federica.tanlongo@garr.it">federica.tanlongo@garr.it</a>	GARR

**Table 3 – Project administrative and technical management: roles and contact details**

WP/Activity	Leader	Partner
WP1 - Project administrative & technical management	Federico Ruggieri, <a href="mailto:federico.ruggieri@roma3.infn.it">federico.ruggieri@roma3.infn.it</a>	INFN
A1.1 - Administrative management	Federico Ruggieri, <a href="mailto:federico.ruggieri@roma3.infn.it">federico.ruggieri@roma3.infn.it</a>	INFN
A1.2 - Technical management	Giuseppe Andronico, <a href="mailto:giuseppe.andronico@ct.infn.it">giuseppe.andronico@ct.infn.it</a>	INFN
A1.3 – Liaison with related Projects	Federica Tanlongo, <a href="mailto:federica.tanlongo@garr.it">federica.tanlongo@garr.it</a>	GARR
WP2 - Network planning and interoperability study	Gabriella Paolini, <a href="mailto:gabriella.paolini@garr.it">gabriella.paolini@garr.it</a>	GARR
A2.1- Network connectivity plan	Kai Nan, <a href="mailto:nankai@cnic.ac.cn">nankai@cnic.ac.cn</a>	CNIC
A2.2 - Analysis of multi-protocols Grid connectivity	Valentino Carcione, <a href="mailto:valentino.carcione@garr.it">valentino.carcione@garr.it</a>	GARR
WP3 - Pilot infrastructure operational support	Davide Salomoni, <a href="mailto:davide.salomoni@cnaif.infn.it">davide.salomoni@cnaif.infn.it</a>	INFN
A3.1 - CNGrid-EGEE interoperability	Depei Qian, <a href="mailto:depei.q@buaa.edu.cn">depei.q@buaa.edu.cn</a>	BUAA
A3.2 - Harmonisation of Authorisation & Security Policies	Ognjen Prnjat, <a href="mailto:oprnjat@admin.gnet.gr">oprnjat@admin.gnet.gr</a>	GRNET
A3.3 – Operational support of Advanced Services	Enrico Fattibene, <a href="mailto:enrico.fattibene@cnaif.infn.it">enrico.fattibene@cnaif.infn.it</a>	INFN
A3.4 - Promote new Asian Grid Infrastructures	Markus Schulz, <a href="mailto:markus.schulz@cern.ch">markus.schulz@cern.ch</a>	CERN
WP4 - Applications	Fabio Polticelli, <a href="mailto:polticel@uniroma3.it">polticel@uniroma3.it</a>	UROM3
A4.1 - EGEE applications	Gang Chen, <a href="mailto:gang.chen@ihep.ac.cn">gang.chen@ihep.ac.cn</a>	IHEP
A4.2 - Astroparticle Physics applications	Cristian Stanescu, <a href="mailto:cristian.stanescu@roma3.infn.it">cristian.stanescu@roma3.infn.it</a>	INFN
A4.3 - Biology applications	Irena Roterman-Konieczna, <a href="mailto:myroterm@cyf-kr.edu.pl">myroterm@cyf-kr.edu.pl</a>	JUMC
WP5 - Dissemination	Federica Tanlongo, <a href="mailto:federica.tanlongo@garr.it">federica.tanlongo@garr.it</a>	GARR
A5.1 - Project dissemination activities	Sijin Qian, <a href="mailto:sijin.qian@cern.ch">sijin.qian@cern.ch</a> , <a href="mailto:sijin@hep.pku.edu.cn">sijin@hep.pku.edu.cn</a>	PKU
A5.2 - Dissemination of advanced knowledge activities	Giuseppe Andronico, <a href="mailto:giuseppe.andronico@ct.infn.it">giuseppe.andronico@ct.infn.it</a>	INFN
A5.3 - Promoting new communities	Roberto Barbera, <a href="mailto:roberto.barbera@ct.infn.it">roberto.barbera@ct.infn.it</a>	INFN

**Table 4 – Workpackage and Activity leaders and their contact details**

## 6. PRESENTING EUChinaGRID TO THE PUBLIC

*Project Branding:* From the very beginning, branding has been regarded as a key point to disseminate the Project and ensure that all related documents and materials were easily recognisable and easy to remember. Therefore, one of the first steps in order to build up the project presentation to the public (as well as the Participants themselves) was the creation of a consistent look-and-feel to be applied to each graphical element.



**Figure 3 – The EUChinaGRID official logo**

*Project document templates, stylesheets and guidelines:* A set of characterizing graphical elements were created in order to identify the Project's official formats and were used as a basis in designing all EUChinaGRID official templates; a kit containing such materials (project logo, project headed notepaper, .ppt presentation, web .css, word document and web pages templates files) was made available to Partners (see Annex 2), who were required to use the standard document templates when producing any Project-related document.

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Interconnection & Interoperability of Grids between Europe & China

**Figure 4 – Some graphical elements selected in order to characterize the Project's look & feel**

The kit includes as well the EUChinaGRID template for EU-deliverables and related accessory documents, such as delivery notes, deliverable review forms etc. In this case, the FP6-2004-Infrastructures-6-SSA-026634 PUBLIC 21 / 26

template provides not only graphical and style formats, but also a general schema of the organization of contents: this aims to facilitate the editor(s) in maintaining a certain coherence in the architecture of the documents as well as format standards.

Some general guidelines about conventions, file naming etc for standard EUChinaGRID documents (such as deliverables, reports, official minutes etc) were as well settled and adopted:

- All documents will be named after the following naming scheme: EUChinaGRID [Type]-[WP/PM/GEN]-[Number]-[Date].
- The related file name will follow the same rule than above.
- All documents will use the British English date format (dd/mm/aaaa).
- As specifically for EU-deliverables, titles must be the same as the ones defined in the Technical Annex to the Contract and listed in the Deliverable table included in this document.
- The deliverable identifier will be univocal and will have the form: EUChinaGRID [Deliverable number]- v[Version number].[Revision number]<sup>1</sup>

## 6.1. FIRST PROJECT COMMUNICATION/DISSEMINATION MATERIALS AND TOOLS

Several tools and materials were planned and produced in the early phases of the project, with two main aims:

- Successfully disseminate the project to the public;
- Facilitate the exchange of information among Project Partners, Third Parties and Contributors.

The following are the initial communication and dissemination materials:

- *EUChinaGRID information sheet*: A typographic-quality Project presentation brochure (see Annex 1 to this document) is available on the project website and will be given out during events. The information sheet is currently available in English, but a Chinese translation is foreseen in brief. The document will be submitted to periodical updates.

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<sup>1</sup> The Version/Revision mechanism is intended to track univocally modifications made to the document itself. When one of the editors changes a document, he/she updates the Version and/or Revision numbers. Minor changes imply an increment in the Revision change, while larger ones imply an increment in the Version number. For the delivery of a new Version/Revision, the document log should be as well updated.

Of course, the Version-Revision number is optional for documents which are not supposed to evolve and do not therefore need any tracking of changes.



**Figure 5 – A screenshot from the homepage of the EUChinaGRID website**

- *EUChinaGRID public website*: A public website is online from the very beginning of the project at the URL: <http://www.euchinagrid.org> and its initial architecture and contents were constantly enlarged and improved to meet the requirements of the Project community and to reflect the proceeding of works. Although the general architecture of the website can be regarded as “final”, new contents and tools will be added as the project goes on.

A Chinese version is foreseen to be created and made available from the Chinese parties in the next few months.

The website addresses different targets, from the Project community and new potential users to press and the large public. This is expressed in the content architecture, which is organized in three main areas:

- *Public Area*, including general information about the project (partners, applications, work packages, links and FAQs sections), how to get in touch with the project staff and join it (joining, hosting a tutorial and contacts sections); it also contains some sections specifically addressing press and partners institution, which can give a picture of what’s going on in the project and of its actual Press coverage (Press releases, press cuttings and news);
- *Project Status* including a “milestones”, “deliverables” and “reports” section and providing the project staff as well as the larger public with updates about the Project’s progresses. A card illustrates the status of each of these documents and other related information (abstract of the document, link to the document’s location on the document server, related documents and links etc). Through

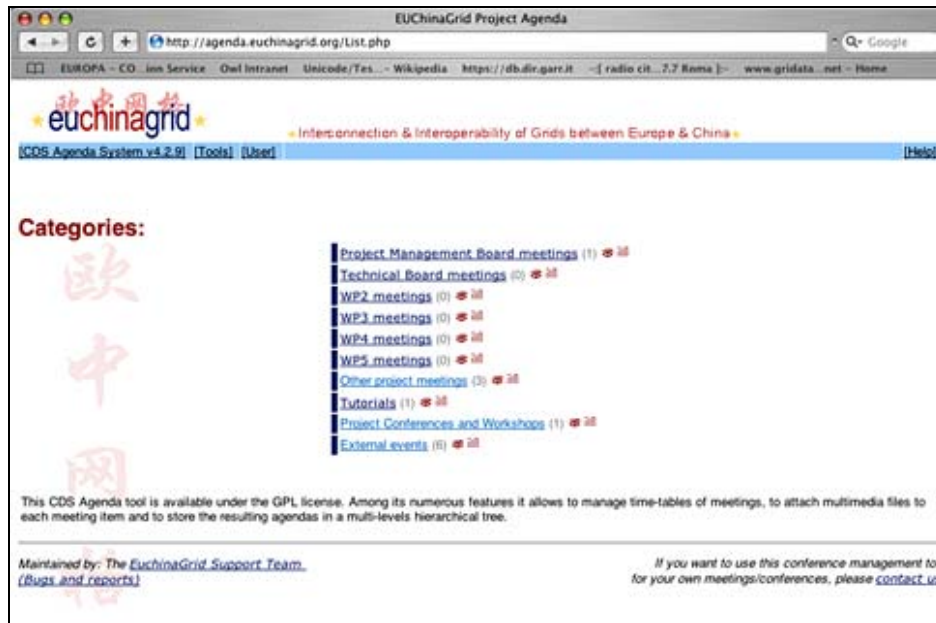
the apposite online forms, is also possible to give a feedback and/or ask for more information to the project's staff.

- *Working Tools* conceived as a summary of all online tools supporting the collaborative day-by-day project activities (see below for a list).
  
- *EUChinaGRID electronic tools*: A number of online tools were installed and made available to Partners in order to facilitate communication and easily perform the project activities keeping the number of person-to-person meeting to a minimum, which will be a key success factor, taking in consideration the relevance of distances and travel expenses. The following is a list of tools currently activated:
  - *Project Mailing lists* ([http://www.euchinagrid.org/mailling\\_list.html](http://www.euchinagrid.org/mailling_list.html)). Currently, several mailing lists have been activated in order to facilitate the project information flow. They have a web user interface using the Mailman tool, which provides subscribers with some information about the lists' membership etc and a mail archive. The following are the active mailing lists (till now)<sup>2</sup>:
    - o [partners@euchinagrid.org](mailto:partners@euchinagrid.org) (general discussion list)
    - o [po@euchinagrid.org](mailto:po@euchinagrid.org) (the project office list, mainly addressing financial, administrative and management issues)
    - o [tb@euchinagrid.org](mailto:tb@euchinagrid.org) (the technical board list, addressing technical issues of broader interest)
    - o [pmb@euchinagrid.org](mailto:pmb@euchinagrid.org) (the project management board list, addressing major management and strategic issues)
    - o A working list per each technical workpackage, addressing issues which relate the proceedings of project's activities in that field:
      - [wp2@euchinagrid.org](mailto:wp2@euchinagrid.org)
      - [wp3@euchinagrid.org](mailto:wp3@euchinagrid.org)
      - [wp4@euchinagrid.org](mailto:wp4@euchinagrid.org)
      - [wp5@euchinagrid.org](mailto:wp5@euchinagrid.org)
  - *Project agenda* (<http://agenda.euchinagrid.org/List.php>): an online agenda tool, based on the CDSware open software (widely known from people involved in projects such as EGEE, in which the software is used as well) has been installed and customized, in order to provide information about Project-related internal and external events.

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<sup>2</sup> Apart from the "Partners" and "PO" ones (conceived not only for internal discussions among members, but also to give others the opportunity to get in touch with the management, ask for more information etc), lists are closed and they are especially intended to support internal work. Therefore, non-members submissions are possible on those lists, but they are qualified to the confirmation by the list owner, who's normally the coordinator of the working group (for instance, the owner of the "tb", Technical Board's list is the Technical Manager).

The events are organized in categories (PMB meetings, TB meetings, WP meetings, Other internal meetings, Tutorials, Project Conferences and Workshops plus a calendar of related external events). The tool also allows the PO and/or the speakers to upload or link files (transparencies, papers, websites etc).



**Figure 6 – A screenshot from the homepage of the online Project agenda**

- *Project document repository* (<http://documents.euchinagrid.org/>): an official document server is available, in order to provide an easy access to all project documents and materials: currently in phase of customization, it is based on the CDSware open software as well. Documents are divided in categories and, when needed, categories split in subcategories.
- *Trouble ticketing online system* (<http://support.euchinagrid.org/>): Based on the Xoops/Xhelp tool, the online trouble ticketing is intended to facilitate the requests of support from EUChinaGRID users and their delivery to the relevant group of experts; the questions and answers gathered through this tool will converge into a knowledge base which will be of interest for new users and will ease the work of the support team. The tool, which is currently in phase of customization, is jointly managed from the PO (which is the main responsible for the website) and from the ROC team.
- *Grid Monitoring Tool* (<http://euchina-gridice.cnaf.infn.it:50080/gridice/site/site.php>). Based on the GridICE software, this tool addresses the technical personnel and allows them to get a picture of the pilot sites and infrastructure, with detailed statistics on job etc.
- *Project weblog* (<https://www.euchinagrid.org/weblog/>): the tool – installed but in phase of customization, is intended to provide an easy way to communicate and collaborate

to all project partners, contributors and users; furthermore, it can host some of the most important project documents, thus providing a useful redundancy of the information.

- *Gstat Tool* (<http://goc.grid.sinica.edu.tw/gstat/euchina/>): a tool providing statistics and monitoring the pilot sites installations is already in operation; this tool is widely adopted within EGEE and related project, such as BalticGrid, EUMEDGRID, SEEGRID and EELA and therefore it is expected to be well-known by most partners.
- *EUChinaGRID VOMS* (<https://voms2.cnaf.infn.it:8443/voms/euchina/>): This tool is intended to manage the EUChinaGRID Virtual Organization and so provides all EUChinaGRID users with an access to the pilot infrastructure. In order to access the VOMS, users are required to provide a valid certificate.

Annex 1: project presentation leaflet

Annex2: official template kit