



EDITORIAL

Herbert Hoeger, EELA WP4 Deputy Manager

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EELA News
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EDITORIAL

Herbert Hoeger,
EELA WP4 Deputy Manager
(University of Los Andes, Venezuela)



EELA has made a huge difference in Latin America when it comes to grid technology in terms of infrastructure and knowledge. It is almost as black and white.

Before EELA there were very few people and institutions working and knowing about grids. Some people knew about Globus and other tools and were experimenting with them and trying to do some implementations. Venezuela, with Brazil and Mexico participated in an attempt to establish the Latin American and Caribbean Grid (GridLAC: Grid Latino Americano y del Caribe) sponsored by Sun Microsystems, that never realized.

The topic was hot and when grids were mentioned in workshops and conferences people got excited and willing to know more about it. Before EELA started, there was the First Latin American Grid Workshop held in Mérida, Venezuela, in November 2004. We had the participation of people like Jay Boisseau, Maytal Dahan, Barton Miller, Miron Levny, Roberto Barbera, Flavia Donno, Elisabetta Roncheri, Stefano Cozzini and Nicolas Jacq, all talking and tutoring about grid and grid related topics. This event drew a lot of attention and was a first effort to promote the grid technology among our countries.

However, it was only after EELA started that the knowledge about grids was really spread out in the region by many workshops, tutorials and conferences and we actually have a grid infrastructure.

Now people have grids and know about it. There is still a lot of work to be done since many more people, institutions and countries have to be incorporated, and we have to find ways to add more resources to these grids and make them sustainable.



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A report about success:

THE SECOND EELA GRID SCHOOL SHIMMERED THE MAP OF GRIDS IN LATIN AMERICA

EGRIS-2, the Second EELA Grid School, was held in Merida (Venezuela), from July, 30 to August, 10, 2007. Built on the successful experience of EGRIS-1 (Itacuruçá, Brazil, December 2006), EGRIS-2 aimed to create the necessary environment in Latin America for the porting of new applications to the EELA Grid Infrastructure. And just giving a glimpse to the scores, it can be said that the objective was totally achieved. Scores: 2 weeks, 11 students, 10 tutors, 6 countries represented and 5 applications gridified.

María José López Pourailly



Sponsored by EELA, CeCaCULA and University of Los Andes, Merida (Venezuela), EGRIS-2 was held in the Hotel El Serrano at Merida, Venezuela, from July 30th to August 10th, 2007. Its programme, based both on lectures and hands-on practices, covered in-depth the main topics of Grid technology, as well as the EGEE/EELA middleware technicalities. And about the results of that programme application and therefore, of the School itself, we spoke with Herbert Hoeger, who was the Director of EGRIS-2.

12 applications were selected to be gridified during the school; were they all in fact gridified?

From the 12, at the end we had only 5 due that the other groups were unable to attend for different reasons like administrative and budget problems and even if EELA in some cases provided financial support.

We had 1 application from Brazil, 2 from Cuba, 1 from Ecuador and 1 from Mexico. The applications were:

- AERMOD (CUBANERGIA, Cuba)
- Java Distributed Computing System (Universidad de las Ciencias Informáticas, Cuba)
- Hydrologic Model (Universidad Técnica Particular de Loja, Ecuador)
- Aiuri (COPPE/UFRJ, Brazil)
- LEMDistFE (UNAM, México)

How many students did you have in the school?

We had 11 students, 3 from Brazil, 4 from Cuba, 2 from Ecuador and 2 from Mexico. They were assisted by 2 tutors from Brazil, 2 from Cuba, 3 from Italy, 2 from Mexico and 1 from Venezuela. Only 7 were present for the whole tutorial and 2 were only partially present.



Which were the main difficulties?

There were no major difficulties, besides getting everything ready for the school which amount a lot of work.

Which were the main achievements?

The 5 applications were basically ported to the grid. The main work was done and the students went back only having to work on improving the interfaces and doing some fine tuning.

Which was the general response of the students? Were they committed with the main objectives of the school?

Besides having some escapees to the disco and stores, the students responded very well and did their work.

In terms of knowledge dissemination, the students that did participate in the school, are now able to create their own grids and to port their own applications to those grids?

The focus of EGRIS-2 was on porting specific application, goal that was reached. Installing grid is more of a administrators or operator on duty tutorial.

The team that was in charge of running EGRIS-2 has been involved in many previous tutorials. Regarding the level of knowledge that existed in Latin-America before the establishment of EELA, which is their perception about the current level of Grid knowledge that LA shows?

Before EELA only a few people knew and had contacts with grids and there were a few attempts of establishing grids, like

the Latin-American and Caribbean grid (GridLAC) by Sun, that was never realized. The operation knowledge was almost non-existent. Now the story is completely different. Many institutions in different countries are excited and anxious to know about grids, and some others (the EELA involved ones) are ahead and running grids and providing training and dissemination about them.

Did any idea of new Grid project or application for the future arise during EGRIS-2?

Brazil, Cuba and Mexico already have running grids. Ecuador showed a high interest in setting up a grid and become an EELA partner. Some institutions also raised their interest for porting other applications, like the Cubans with informatics applications.

Which is your own evaluation of EGRIS-2?

The goals were reached and the Cubans are ready to set up EGRIS-3. They were able to see all the issues that they have to take care of for EGRIS-3. The applications were ported to the grid and the effort involved in EGRIS-2 was worth.

EGRIS-2 Website: <http://www.cecalc.ula.ve/EGRIS-2/>



Mark it now in your Agenda:

**DECEMBER 3 TO 5 WILL
BE NAMED AS
3rd EELA CONFERENCE
BY THE ITALIANS**



3-5 December 2007
Catania - Italy
www.eu-eela.org/conference3

Hosted by the INFN (National Institute of Nuclear Physics) in Catania, Italy, the Third EELA Conference is meant to be an "open conference" devoted to the scientific results attained by EELA, EGEE and all related projects. The event will take place at the Department of Physics and Astronomy of the University of Catania between the 3rd and 5th of December, 2007. For those who are interested in sending papers to be presented during the Conference, the call for abstracts is already open and it will close in September 30, 2007.

The 3rd EELA Conference is meant to be an "open conference" and its Scientific Programme is conceived to reach two main objectives:

- present a selection of the most impressive scientific results that have been obtained in the last two years not only by EELA but also by EGEE and the other EGEE "Related Projects";
- discuss the main achievements of the Projects and provide an outlook to the near future with special attention to the issue of the long term sustainability of Regional e-Infrastructures.

In the beautiful surroundings of the Etna volcano, EELA will try to demonstrate why it is drastically changing the perspective about e-Science in Latin America. but just to give you a little sight about what we are talking about, have in mind that it is not only because of the number of grid sites, or CPUs, or Terabytes, but rather because EELA is:

- "Building" the human network fostering scientific collaborations across the Atlantic;
- Raising the awareness of new ways of doing (e-)Science;
- Putting the seed for a long term sustainability of e-Infrastructures in the Region.





Photo by: Leandro N. Ciuffo.

Call for Abstracts Open!

Authors are invited to submit abstracts on original work using the form available in: <http://indico.eu-eela.org/abstractSubmission.py?confId=96#interest>. Only web submissions will be considered. Accepted abstracts should be converted into papers of not more than 10 pages using the template that's accessible at: <http://www.eu-eela.org/doc/EELACnf3-template.doc>.

The abstract submission deadline is 30 September 2007. Abstracts and papers must be written in English (using the UK English dictionary).

An ISBN referenced book with the selected papers will be printed and given to the attendees. It is mandatory to have at least one of the co-authors of the papers registered for the conference in order to have the paper published in the referenced book.

The following topics concerning e-Science and Grid Computing are of interest, but not restrictive:

Grid Communities and Applications

- Culture, Arts and Humanities
- Biomedical informatics/e-Health
- Distance and eLearning
- High Energy Physics
- Earth Sciences
- Material Science
- Astrophysics
- e-Government

e-Infrastructures case studies

- AAA in a Grid Environment
- Security Challenges
- Grid Middleware Interoperability
- Scientific repositories
- Grid in Education and Education with/on Grid
- Grid Portals and Problem Solving Environments
- Data Access and Management
- Resource Management and Scheduling

e-Infrastructures for Development

- Ongoing and/or Planned Grid Projects in Europe and the rest of the World
- Regional, National and/or International Grid Infrastructures Deployment and Operation



- Long term sustainability
- Quality Assurance
- Public policies
- Mobile and e-Infrastructures Convergence
- Industry role and participation

If you are interested in sending a paper, please go to:
www.eu-eela.org/conference3/.

Critical dates:

- Abstract submission deadline: 30 September 2007
- Notification of acceptance by: 15 October 2007
- Camera-ready papers by: 15 November 2007

Tentative Programme

The 3rd EELA Conference Programme is structured by a Programme Committee which is constituted by relevant scientists and academics from EELA and the most important related projects and initiatives:

- Bernard Marechal (UFRJ/CEDERJ - Brazil)
- Diego Carvalho (CEFET-RJ and UFRJ - Brazil)
- Federico Ruggieri (University of Roma Tre - Italy)
- Herbert Hoeger (ULA - Venezuela)
- Luciano Milanesi (CNR - Italy)
- Malcolm Atkinson (e-Science Institute - U.K.)
- Ognjen Prnjat (GRNET - Greece)
- Philippe Gavillet (CERN - International)
- Rafael Mayo (CIEMAT - Spain)
- Ramon Gavela (CIEMAT - Spain)
- Robert Jones (CERN - International)
- Roberto Barbera (University of Catania and INFN - Italy)

The Programme has been drafted as follows, but it is important to have in mind that this structure is preliminary, so it can be modified:

Day 1 - Session 1: Project results - administrative and general presentation of all projects

Day 1 - Session 2: Project results - Presentation of work packages

Day 2 - Session 3: Grid Communities and Applications (based on Call for papers)

Day 2 - Session 4: e-Infrastructures case studies (based on Call for papers)

Day 3 - Session 5: e-Infrastructures for Development (based on Call for papers)

The 3rd EELA Conference is an open event; the registration will be opened soon.

Further information: www.eu-eela.org/conference3/

OUTCOMES OF THE BELIEF-EELA CONFERENCE

The BELIEF-EELA Conference was held between 25-28 June in Rio de Janeiro, Brazil, and was attended by several European and Latin-American players who are involved in Grid projects, as well as professionals from industries which are using this technology in their activities. After four days, the conclusion was univocal: Latin-American countries must come closer to their European peers; join the initiatives which have already been created and develop their own; and help create synergies and collaboration opportunities.

María Paz Mirosevic Alborno

The event comprised four days of plenary and parallel sessions. Four days devoted to the analysis of e-Infrastructures and their main advantages; the potential of scientific repositories as global knowledge infrastructure to promote collaborative research; and the role of Grids as a tool capable of encouraging research and development at a global level. There was plenty of relevant knowledge at the Belief-EELA Conference.

Three days totally devoted to strengthening e-Infrastructure collaboration on an international scale and across diverse sectors. A major sessions programme and loathes of work that indeed worth the effort. And yes we assure that it worth it, mainly when we realise about which were the key outcomes: a better understanding of the potential of e-Infrastructures; increased knowledge transfer for mutual benefit; new business creation; and new solutions to tackle pressing issues.

These outcomes will help not only EELA and Belief to focus their discussions on how to drive forward the adoption of e-Infrastructures, but also to the related Grids, e-Infrastructures and e-Science projects and programmes. Experts came together to form four Focus Groups dedicated to the 7th Framework Programme (FP7); the National Grid Initiatives (NGI); the EELA project and the BELIEF project. These dedicated teams discussed about the evolvement of e-Infrastructures in both Europe and Latin America, future collaborative scenarios and how to capitalise on the input to the conference.

The conference featured presentations given by experts who are currently applying the aforementioned technologies in their projects. They presented specific cases to show how



they have managed to make the most out of e-Infrastructures, achieving great success thanks to initiatives such as Belief and EELA.

The first plenary sessions were in charge of the managers of the projects which gave the conference its name: Ramón Gavela, from EELA, and Stephen Beniams, from BELIEF. They were joined by Paulo Lopes, representative from the European Commission Delegation in Brazil, who spoke about the importance of FP7 and the possible paths to sustain the connection of e-Infrastructure research communities from both regions. The opening ceremony was also attended by Fabio Nascimbeni from the WINDS-LA Project, Wolfgang Gentzsch from the German Grid initiative, José Roberto Cardoso from the Polytechnic School at the USP (Brazil) and Roberto Aroso, President of Brazil Telecommunications, who represented the industry.

Day 1: The potential of e-Infrastructures

During the first day, the parallel sessions focused on topics of sustainability, interoperability and e-Education. The first



session explained why sustainability was a priority for the evolution of e-Infrastructures and discussed the need to continue helping initiatives at an international level to build a bridge between consolidated and developing economies. The session referred to Interoperability was an assessment of the activities carried out in Latin America and elsewhere, focusing on technological aspects. The e-Education session explored the implications of long geographical distances through the presentation of case studies about educational initiatives which have been developed to cope with this issue.

Day 2: Earth Sciences, e-Health and e-Humanities

On the second day, the event explored the current and future state of e-Infrastructures in the fields of Earth Sciences, emerging e-Humanities, Biomedical Informatics, Scientific Repositories and Security and Certification.

The session on Earth Sciences dealt with the importance of e-Infrastructures, which made it possible, for instance, to conduct studies on the impact of “El Niño” phenomenon on industrial activities in the Amazon. The session about Scientific Repositories was devoted to showing what can be done through the use of e-Infrastructures, allowing for more reliable services which provide digital content at a large scale. This was done by analysing the current state across different disciplines.

The session on Biomedical Informatics featured concrete examples where complex cases are being addressed in the field of medicine and biology by processing a great number of cases and tests results. At the meeting on e-Humanities Kim Veltnam referred to the use of e-Infrastructures in the field of culture and showed applications in digital libraries, museums, entertainments and games. Finally, the session on Security and Certification featured a discussion on the issue of applications in areas where security is crucial for good practices and the correct use in e-Science and business communities. The Business session was held during the afternoon of the second day. Here the speakers explained how Grid and Supercomputing technologies can improve the value of large, medium and small enterprises.

Day 3: Scientific Experiments and Collaborative Research

On this day the sessions were devoted to: e-Infrastructures for development, High Energy Physics, Quality Guarantees and Converging e-Infrastructures.

The session on e-Infrastructures for development included the presentation of case studies from India and Cuba to



Different moments of the Conference.



make an evaluation of the policies aimed to extend the e-Infrastructures' connectivity and thus bridge the digital divide. The High Energy Physics session highlighted the role of e-Infrastructure as a support for science; the challenges of interoperability and virtualisation of the path towards the ubiquitous independent services of the Grid platform. The session devoted to Quality Guarantees and Certification featured the presentation of the key characteristics of the ETICS multi platform (E-Infrastructures for Testing, Integration and Configuration of Software) and the open source service to improve the quality of software, as well as modelled systems and perspectives on open software, education and entertainment.

Day 4: Results and Planning

During the last day of the Conference, all delegates gathered into four Focus Groups devoted to: the Seventh Framework Programme (FP7), the National Grid Initiatives (NGI), the EELA Project and the BELIEF Project.

The first two meetings established some guidelines for participation in FP7 and for the creation of NGIs. In the EELA meeting, Bernard Maréchal –EELA Deputy Project Coordinator- revised the planning of future meetings, and there was a discussion on the Project's possible extension. Latin-American organisations were invited to create e-Infrastructure initiatives, making use of RedCLARA. There was also a discussion on the problems of countries in this region to obtain funding and support from their governments for their scientific and technological initiatives. In the same way, the BELIEF Project evaluated its management and planned the steps to be followed in the next months.

As a final conclusion of the event, all those who were present agreed on the fact that Latin America must make an effort to manage more e-Infrastructure projects and thus attain, with the European support, a better use of technologies in favour of the general development of the countries in the part of the world.

Belief – EELA Conference: www.belief-eela.org/ (FP7), the National Grid Initiatives (NGI), the EELA Project and the BELIEF Project.

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Kim Veltman.



Biomedical informatics/e-Health session.

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Belief – EELA Conference: www.belief-eela.org/



La Antigua, Guatemala will be the venue of the

EELA GRID TUTORIAL ORIENTED TO THE CLIMATE AND THE BIOMEDICINE AREAS & 7TH EELA WORKSHOP

"Course and Forum about Grid Technologies and of its applications to Climate studies. The establishment of a thematic Grid-Climate in Central America", is the title of the activity that, aiming to settle the first nodes of a future Ibero-American Network of Grid applications in Biomedicine and Climate and particularly focused in "El Niño" Phenomenon, will be carried out in the facilities of the Centro de Formación de la Cooperación Española in La Antigua (Guatemala), in October 15th to 19th.

María Paz Mirosevic Alborno

The Grid Tutorial is organized by AECI (Spanish Agency for International Cooperation), CIEMAT (Energetic, Environmental and Technological Research Centre of Spain) and the EELA Project, in the framework of the AECI's Ibero-American Programme of Specialized Technical Education .

Regarding the success of the previous versions of the EELA Grid Tutorials, the events objective is to take to those countries that are outside of the EELA scope of action, the benefits of training in Grid technologies. Teaching and forming new competent professionals in the use of Grid technologies, by giving them the tools and technical knowledge which are required to use the developed infrastructures and learn about the applications related to the Climate studies, are also goals of the Tutorial and Workshop.

It is expected that those who will attend both the Course and the Forum about Grid technologies acquire, during the activities, the necessary knowledge and skills to become local trainers in the areas of implementation and use of Grids. People coming from the academic and of research worlds, as persons with scientific-technical representation within the Latin-American region, particularly those who are related to Infrastructures, Communications, Biomedicine and Climate areas, are expected to attend to the Course. In order to participate in the "Practices" section of the Course it is recommendable to have previous knowledge of programming and/or administration in LINUX environment. Regarding the participation in the "Practices" section, the priority will be for those who are currently working in those public agencies that are related to Climate studies, research and work. Those who are not going to participate in the practical sessions, don't require previous formation in

Information and Communication Technologies, though it is most convenient for them to have some knowledge about the current state of the art -in this field- of their countries. The Centro de Formación de la Cooperación Española (Education Centre of the Spanish Cooperation) has offered, for the benefit of this activity, 25 partial grants that includes: the hotel payment and maintenance (meals) for the selected participants. The postulation for these grants can be done on-line though the following URL:

<http://indico.eu-eela.org/confRegistrationFormDisplay.py/display?confId=99>.

The postulations deadline has been settled for September 15th. The selected candidatures will be communicated starting on that date in order to confirm their acceptance.

More information of these activities: <http://indico.eu-eela.org/conferenceDisplay.py?confId=99>.

EELA opened the registration for two new Tutorials

People interested in participate must register as soon as possible. The registration is free of charge.

11th Tutorial (for Users and System Administrators)
Date and place: 10-14 September - Sevilla, Spain
Register at: <http://www.irisgrid.es/tutorial3/registro/>

12th Tutorial (for Users and System Administrators)
Date and place: 24-28 September - Lima, Peru
Register at: <http://indico.eu-eela.org/confRegistrationFormDisplay.py/display?confId=98>



Within the framework of the EELA Project

THE CHILEAN NREN HAS BEEN ACCREDITED BY TAGPMA AS CERTIFICATION AUTHORITY

REUNA, the Chilean National Research and Education Network (NREN), has been fully accredited by The Americas Grid Policy Management Authority (TAGPMA) as a Certification Authority (CA). This achievement does not only imply the success of this NREN, but of EELA, since after its establishment has been possible to have two CAs in Latin-America -the first one was UFF LACGrid CA (Brazil). The Accreditation was given to REUNA during the 5th TAGPMA face-to-face Meeting, held in July in Banff, Canada. Later in August 6th, so REUNA CA is now included in the IGTF's (International Grid Trust Federation) distribution list of all the globally accredited CAs.

María José López Pourailly

"Chile and Brazil are currently the only two Latin-American countries that can issue certificates to be used in computational Grids", explained Sandra Jaque, Technical Manager of REUNA, who added that "this great news and achieved goal must be recognized within the context of the EELA Project and here, we must acknowledge and thank the collaboration of LIP and particularly of Jorge Gomes, who is the Task Leader of the T2.2 of EELA, which is 'Certification Authorities and Virtual Organizations', and also we must distinguish the role of TAGPMA and of the good collaborative environment that has established".

Thanks to the new status as CA of REUNA, the Chilean academic community will now be able to be certificated in order to be validated in the world of Grid technologies, which will open new possibilities for the scientific, engineering and academic communities of Chile, in terms of applications, resources and future projects.

REUNA is now working to establish the required Registration Authorities, as most of the CAs do, whose mission is to know those who are asking for a certificate and to guarantee that they are who they say they are.

Within the EELA framework, the success of Brazil and Chile in terms of obtaining the accreditation is going to be followed in short by both the Argentinean and Mexican CAs who are practically ready and also by the Venezuelan CA is well on the way.

TAGPMA is a federation of authentication providers and relying parties headed by a Policy Management Authority (PMA) of those responsible for grids in North and South America. TAGPMA goal is to foster the cross-domain trust relationships that are needed to deploy grids in the Americas and around the world. TAGPMA is member of the International Grid Trust Federation (IGTF), that gathers the PMAs of Europe and Asia-Pacific. These institutions are the ones that are called to validate the CAs in terms of their accomplishments of the procedures required in security and operation, that's why they are accredited as trust organisms for the certification release.

More information:

EELA T2.2: http://www.eu-eela.org/eela_wp2_certification.php

REUNA-CA: <http://reuna-ca.reuna.cl/>



Grid Sequence of Climate in EELA Project::

WHAT ABOUT EELA-CLIMATE PROJECT?

In the EELA Task 3.3 "Additional Applications" a Grid Sequence of Climate applications is being developed by 15 people distributed among three institutions from Spain, Peru and Chile. The goal of the project is to obtain a better understanding of how the events like "El Niño" phenomenon, do affect the regional climatic variability and the challenge is to unravel the different patterns of climate variability through different processes, from a temporal and spatial point of view. Through this interview we invite you to learn more about the important work that this team is carrying, the highlights of the project, its results, the beneficiaries and more.

María Paz Mirosevic Alborno

Several EELA partners are currently working in four different fields of e-Science, namely Biomedicine (Task 3.1), HEP (Task 3.2), e-Learning and Climate (Task



how different physical processes are involved.

This is a reality for the different fields of research involving Earth

3.3). This last group have been working together in order to generate a regional model project, a project about analysis of local variability with respect to the remote variability and a project about collaboration between institutions.

We talked with some of the members of this group (which is actually formed by three groups, one from the Cantabria University in Spain, the second from the Servicio Nacional de Meteorología e Hidrología from Peru and the last from the University of Concepción in Chile) in order to know what are they currently doing and which are the challenges for the future. Check the outcomes of this interesting conversation that, through the network, we had with Rodrigo Abarca del Río (Chile) and Antonio Cofiño (Spain), and get astonished as we did with the outstanding work that they are developing.

What is the importance of your group for the EELA Community?

The Scientific Community of the Earth Sciences of Latin America has a short time to do calculations that allow them to make a model of the different constituent systems and their interactions, this allows a better understanding about why and

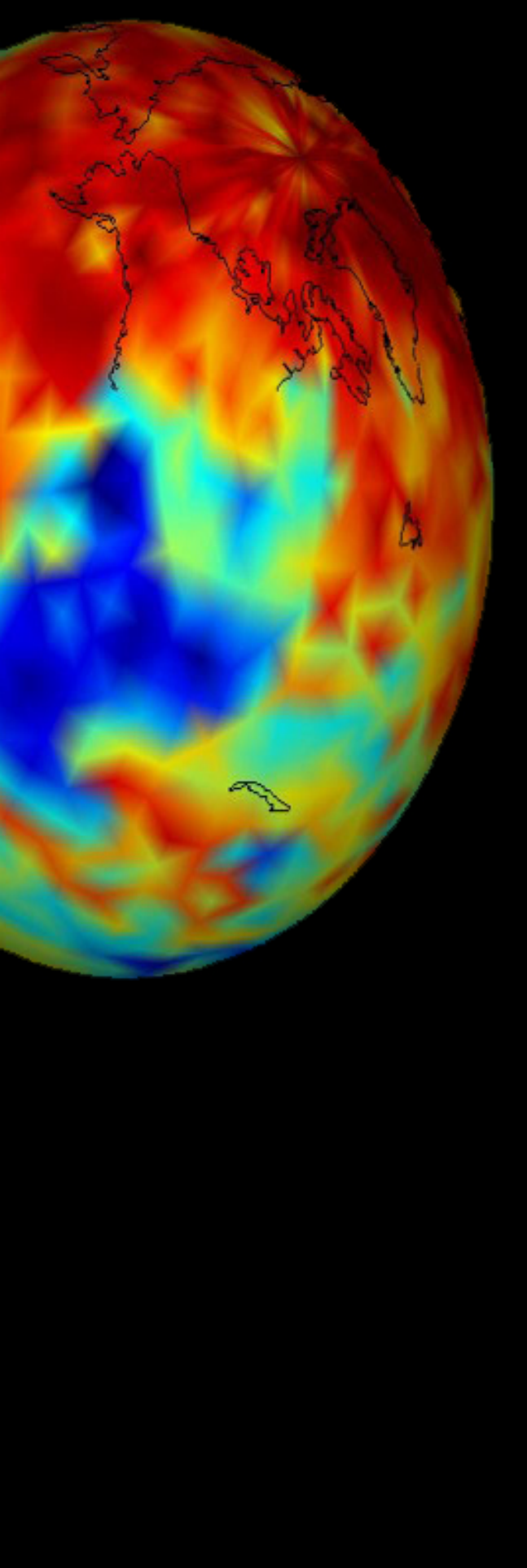
Sciences. Not just in the geophysical field or in the processes involved in the tectonics of the plates (for example), which is important to understand seismology, but also in the processes related with the climate systems in the ocean, the atmosphere and its interactions.

For a better understanding of the climatic system it is absolutely necessary to have a great investment in time of computing in order to understand the different interactions between the ocean and the atmosphere and its processes at different special and temporal scales that affect the climate in South America, mainly in Peru and Chile, since they are influenced by the phenomenon of El Niño.

Another very important variable to understand the importance of the Climate Group for the EELA Project is the facility of the creation of models. That is because it is a very long process that requires years of studies usually in the form of a doctoral thesis.

Another important advance is the Grid Technology itself, which requires the formation of the support personnel and development of new tools that facilitate the use of the Grid





Technology to all the scientific community. This formation is also being carried out in EELA.

About the work that you have been doing in the Climate Application, specifically in the El Niño phenomenon, what is the main goal?

From the scientific point of view, the main goal is to obtain a better understanding of how the events like El Niño affect the regional climatic variability. That means how micro climate systems, like a region or a river basin, are affected by climate variations produced by local or remote phenomena.

The challenge is to unravel the different patterns of climate variability through different processes, from a temporal and spatial point of view.

In Chile the studies are from the Bio-Bio region, where the University of Concepción is established, and in the central region of Peru (SENAMHI).

This study uses different atmospheric models through nesting different resolutions. That means one global model of atmospheric circulation (CGM), the CAM (The Community Atmospheric Model, <http://www.cesm.ucar.edu/models/atm-cam/>) in low resolution (200-20 KM) that force soon different regional model of high resolution (for example 20 KM) by using the WRF (The Weather Research & Forecast Model, <http://www.wrf-model.org/>).

These simulations are verified against regional observations.

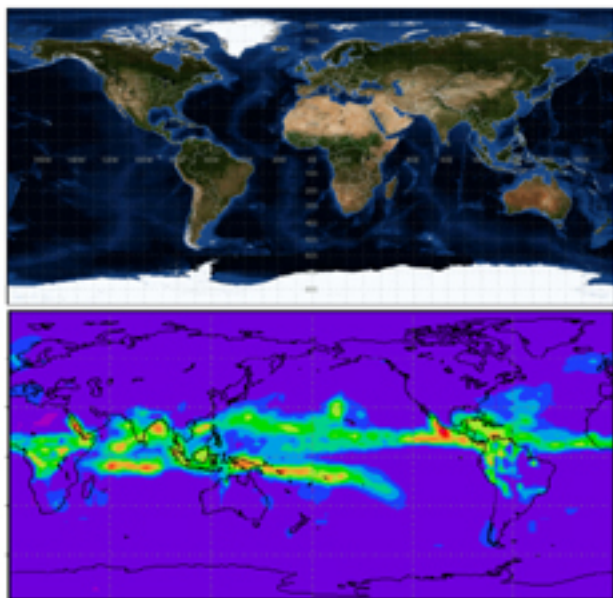
From the technical point of view the great challenge consists in making these simulations and data mining in a Grid environment that allows the collaboration and the access to results and remote data of the different centers involved in the study. In this point the Grid technology offers a great opportunity of technical and scientific development between institutions geographically separated.

Do you know if there exists any other project related with this theme?

Currently there are several projects around the world that are looking to better understand the regional climatic variability, analyzing the past and projections for the future. Our project has several characteristics or peculiarities that make it different and very novel in that it is based on Grid Technology which allows an access to a shared calculation capacity and distributed storage, allowing an ambitious collaborative project.

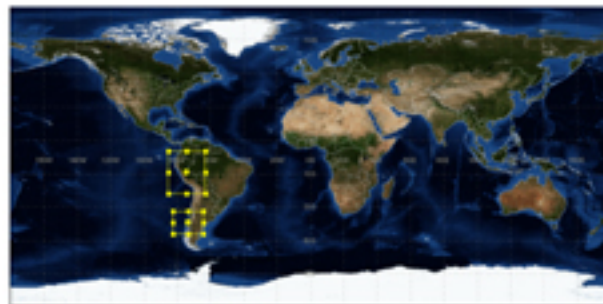
Who are the main beneficiaries with this project?

The main beneficiaries of this project are the members of the scientific community, not just in Latin America, but globally, as the progress obtained can be easily moved to other projects related to Grid technology and Earth Sciences. Particularly this project beneficiates Latin America because of the transfer of knowledge from Europe to this continent which helps to



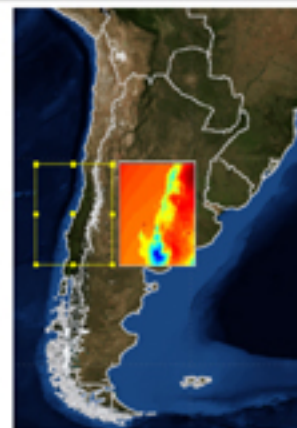
CAM. Global simulation

Requires metadata catalog so it runs
In: UC and CIEMAT (EU), UFRJ (LA).



WRF. Regional Simulation

It runs in any site
of the production
testbed:
UFRJ



generate an easier access to technology for the scientific community in Latin America.

According to you, why is this project is so important?

It is important because thanks to the Grid technology it is possible to have access to the most relevant computing resources and to the geographically distributed storage, offering better capacity than the one that we could have in a local way. In other words, with the local time of calculation it could be possible to do just a few set of simulations, but with this access it can be possible to perform more sets of simulations making possible the generation of valid results. The main objective of our project is the technological transfer of knowledge.

How many people work in the project and how is it organized?

In the EELA Project, the work named as Grid Sequence of Climate is formed by three groups. One from the Cantabria University in Spain, which is the origin of the project, and two in Latin America, one is the SENAMHI (the Peruvian National Service of Meteorology and Hydrology), and the other is from the University of Concepción in Chile. We are 15 people distributed among the three institutions with different specialties: computing engineering, specialists in signs treatment, data mining, global and regional climate models, data engineering,

PHDs in hydrology, climate and computing, and post doctorates in these three areas.

In the task there are objectives of work that we have to do all together in order to obtain final results. The strategy designed means that during the execution we must develop new computing tools of regional models in order to allow a progress in the scientific challenge of the climate models, data and methods of sign treatment.

Which is the main importance of the research you are carrying out for your countries?

We think that we are part of a little technological revolution that is happening in a global level and our contribution is in the field of the geophysics, specifically in climate. We are the first in South America (Chile and Peru), and in Spain to participate. About development we would like to highlight that this project is really original.

It is original for three reasons:

First, because it is based on Grid technology and allows to have shared access of calculation time and memory. In addition, it is part of a cross-sectional EELA Project where many institutions of South America and Europe are involved. This project is accompanied by the experience of all the different



projects of different scientific fields (biology, medicine, high energy physics, etc). In other words, the project is nourished by the continuous renovation of the other fields of science and remarkably of the renovation of the Grid technology. Attending EELA conferences, in which different fields from sciences present their advances, is a very encouraging and exciting experience.

Second, EELA-Climate Project is not a simple project about climate, or another project about regional model, or a project about analysis of local variability with respect to the remote variability or a project about collaboration between institutions. Actually it is a project of all of these things put together. It is a project absolutely different in its conception with a very ambitious objective in technological terms and very notable in usability terms. It is not a tool but it is the creation of a tool that didn't exist before, it is a dynamic integration and statistics that make easy the work of models and analysis in the researches. All thanks to the Grid Technology and to the cultural and scientific diversity of the participants that take part in this project. In other words it is the combination of the philosophy of the Grid Technology, the interchange of knowledge and technology of the models and analysis of climate fields.

Third, we hope that at the end of the project all the process will be automated. This is important because automating is one of the most original points of the project and make it very different and novel respect to the other projects that exist in local and global levels.

Which are the challenges once the project is finalized?

After the technical viability of the developed tools is proven, we have to demonstrate the scientific viability. To do that we are planning to progress in that field doing emphasis in the study of El Niño phenomenon, that affects Latin America. In addition we will try to pursue the objective of taking this tool to a bigger number of institutions and research groups in all Latin America.

Do you think that the results of your group will be useful for new researches in the Latin-American region? How?

One of the most important contributions is that our project will facilitate the integration and access to computer resources and storage capacity for the Earth Sciences scientific community. The idea is that this community will get benefits from this new technology thanks to the divulged work that is being carried out in the EELA Project and particularly by the climate working team.



REUNA invites the EELA community to attend the **2nd CHILEAN NATIONAL CONGRESS ON** **e-SCIENCE**

Chile is getting ready to celebrate the second edition of the National Congress on e-Science which is organised by REUNA (National University Network) and will be held on 12-13 September, 2007 at the Neruda Hotel (Providencia, Santiago de Chile). Funded by CONICYT's Bicentenary Programme for Science and Technology, this activity is free of charge and stands out as an ideal opportunity to learn about the experiences of relevant experts and to find synergies which result in the birth of new projects and initiatives in favour of the development of e-Infrastructures in the region.

EELA will be represented by its Deputy Project Coordinator, Bernard Maréchal, who -as a key speaker- will give a presentation entitled "The EELA Project (E-Infrastructure shared between Europe and Latin America) Status and EELA-2 Proposal".

María José López Pourailly

To encourage discussion at a national and regional level about the development of e-Science in the world and to serve as a strategy to support the advance of scientific and academic research by promoting the most successful initiatives worldwide and those which are first being developed in Chile along these lines. These are goals of REUNA (Chilean NREN, member of the EELA Project) for this second version of the National Congress on e-Science, which this time has been named "e-Science for Bicentenary Chile" - making reference to the 200th anniversary which Chile will soon celebrate.

The first edition was held in September 2006 in Santiago, right after the 1st EELA Conference (also held in the Chilean capital city), and its success made it possible to organise in last May the 1st Workshop for e-Science Structuring as well as this second version of the Congress, which aims to contribute to the creation of a stable e-Science programme through the participation of scientists renowned worldwide for their positive contributions in e-Science and e-Infrastructures projects. As pointed out by Paola Arellano, Executive Director of the Chilean advanced network, "Having an e-Science

programme does not boost the development of a nation, it makes it possible".

In the Latin American context the initiatives focused on e-Science, Grid and e-Infrastructures are crucial to produce the birth of new collaborative projects. Thanks to RedCLARA, today the region is connected to advanced networks in Europe and the USA - with direct access to the Asia-Pacific and Atlantic rims. This connection is the ideal e-Infrastructure and therefore the fundamental tool for the development of e-Science. RedCLARA offers Latin America the possibility of sharing knowledge regardless of geographical boundaries, making it possible at the same time to open new markets and new forms of interaction.

Thanks to the EELA Project and its work on Grid knowledge dissemination, Latin America is now not only aware of the importance of Grid technologies, but also prepared to establish and manage National Grid Initiatives. So, combining RedCLARA connection and EELA experience and knowledge transfer, the current scenario in the Latin-American region is well prepared for e-Science.



In the Congress the local and regional scientific communities will hear about the experiences of countries which have defined a strategic line in their research, development and innovation policies with the establishment of a national e-Science programme, based on the incorporation of Grid infrastructures and high performance applications. It is crucial to learn about these experiences from a primary source, i.e. through the dialogue with international experts from the main areas of research, who have led these initiatives in their countries of origin.

If we add the presentation by the e-Science and Grids initiatives being developed in Chile and Latin America, plus the clear objective of encouraging discussion on the characteristics, themes, needs and impact which should be addressed by e-Science policies and the establishment of a Grid infrastructure development and implementation plan at a local and even regional level, the result is a Congress agenda which invites to actively participate in it.

International speakers

Ken Buetow, Associate Director for Bioinformatics and Information Technologies at the US National Cancer Institute (NCI); creator and leader of the Cancer Biomedical Informatics Grid (caBIG).

John Drennan, Scientific Director of the Australian Microscopy and Microanalysis Research Foundation (AMMRF). This national organisation combines complex venues throughout Australia, allowing researchers to access state-of-the-art instrumentation.

Jane Hunter, Professor of e-Research at the School of Information Technologies and Electric Engineering in Queensland University. She is also CI in three projects by the Special Research Initiative ARC (nanostructural images, a case study in environment and ethnographic analysis), CI in the DART project - funded by ARIIC - and CI in the Virgil project, funded by GrangeNet.

Dieter Kranzlmüller, Coordinator of EGI, European Grid Initiative, which is making an effort to establish Grid infrastructures as sustainable production environments, based on the creation of a national federation of Grid initiatives. He is also Area Director of the Open Grid Forum (OGF).

Hing-Yan Lee, Sub Director of the Singapore's National Grid Office, where he directs, plans and coordinates the national initiative to share and add computing resources for research and industry.

Bernard Maréchal, Deputy Project Coordinator of EELA. He actively works in Experimental Particles Physics, in Nuclear Instrumentation (development of gaseous detectors) and in Distance Learning in CECIERJ/CEDERJ (Brazil) where he coordinates the outreach programme on Physics.

James Oliverio, Director of the Digital Worlds Institute at the University of Florida, where he also serves as Professor of Music & Digital Media.

Bernard Maréchal presentation abstract

For his presentation, entitled as "EELA Status and EELA-2 Proposal", Professor Maréchal will refer to the current status of EELA and the future proposal, named as EELA-2. The abstract of his presentation says: "The EELA (E-Infrastructure shared between Europe and Latin America) project is 20 months old and will be finished by December 2007. At that time the consortium will be dissolved but the success of EELA paved the way towards a new project, EELA-2 (E-science grid facility for Europe and Latin America), currently being elaborated and which will be submitted to European Commission on 20/09/07 under the call "INFRA-2007-1.2.3: e-Science Grid infrastructures". The EELA status and major achievements will be presented, as well as the EELA-2 objectives and organisation".

Note: this event is free of charge.

Further information and online registration at:
http://e-ciencia.reuna.cl/C2007/en_01_01.htm.



GRID EVENTS AGENDA

September

Third CoreGrid Summer School 2007
From 3rd to 7th of September in Budapest, Hungary
<http://www.lpds.sztaki.hu/css07/index.php?m=1>

Seventh International Conference on Parallel Processing and Applied Mathematics
From 9th to 12th of September
<http://www.ppam.pl/>

UK e-Science All Hands Meeting 2007
From 10th to 13th of September in Nottingham, United Kingdom
<http://www.allhands.org.uk/index.html>

11th EELA Grid Tutorial (for Users and System Administrators)
From 10th to 14th of September, Sevilla, Spain
<http://www.irisgrid.es/tutorial3/registro/>

2nd National e-Science Congress: "e-Science for Chile's Bicentenary"
From 12th to 13th of September in Santiago de Chile
http://e-ciencia.reuna.cl/C2007/en_01_01.htm

6th International e-VLBI Workshop
From 17th to 18th of September in Bonn, Germany
http://www.mpifr.de/old_mpifr/div/vlbi/6th_evlbi/index.html

7th Annual Global LambdaGrid Workshop
From 17th to 18th of September in Prague, Czech Republic
<http://www.glif.is/meetings/>

3rd VLDB Workshop on Data Management in Grids
From 23rd to 24th of September in Wien, Austria
http://www.irit.fr/~Jean-Marc.Pierson/DMG_VLDB07/

EU-IndiaGrid workshop in India
From 24th to 28th of September in Pune, India
http://www.euindiagrid.eu/events/Pune_september2007/view

12th EELA Grid Tutorial (for Users and System Administrators)
From 24th to 28th of September, Lima, Peru
<http://indico.eu-eela.org/confRegistrationFormDisplay.py/display?confId=98>

October

Conference EGEE'07
From 1st to 5th of October in Budapest, Hungary
<http://www.eu-egee.org/egee07/home.html>

European meeting point: Energy for Development 2007
From 10th to 12th of October, Beja, Alentejo, Portugal
<http://www.energyanddevelopment-2007.net/pages/news.php>

Interoperability in iGovernment Conference
From 11th to 12th of October in Rome, Italy
http://www.towardsesig2.it/conf_interop/index.php

21st Open Grid Forum –OGF21
From 15th to 19th of October, Seattle, Washington
http://www.ogf.org/OGF21/events_ogf21.php

Course and Forum about Grid Technologies and of its applications to Climate studies
From 18th to 19th of October, Antigua, Guatemala
<http://indico.eu-eela.org/confRegistrationFormDisplay.py/display?confId=102>

The 2007 Microsoft eScience Workshop
From 21st to 23rd of October, North Carolina, USA
<https://cmt.research.microsoft.com/escience07/>

November

Do-Son School on Advanced Computing and Grid Technologies for Research
From 5th to 16th of November in Hanoi, Vietnam
<http://acgrid.in2p3.fr>

4th Engenharias '07 Conference
From 21st to 23rd of November in Covilha, Portugal.
<http://www.confeng.ubi.pt/flash.html>

6th NRENs and Grid Workshop TERENA
From 29th to 30th of November, Magala, Spain/Karlsruhe, Germany
<http://www.terena.org/activities/nrens-n-grids/workshop-06/>

December

Third EELA Conference
From 3rd to 5th of December in Catania, Italy
<http://www.eu-eela.org/conference3/>





E-infrastructure shared between Europe and Latin America