

# DECLARA

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## Agenda

## Editorial



**Joaquín Guerrero, RAAP – Peru,  
 President of the CLARA Board**

The ALICE and CLARA meetings were held a few days ago in Bogotá. The evident satisfaction and optimism were the result of the objective knowledge about the achievements of the ALICE project and the efficiency of CLARA in meeting the goals proposed in its strategic planning. We have reached July 2007 with a well-managed physical network, healthy economy, lots of projects, a neat and organised administration and an ever growing regional awareness about the transcendence of advanced networks for the development of a country. Apart from the aforementioned meetings, there was yet another CLARA-TEC group workshop, a high level meeting attended by an enthusiast and growing group of technicians from the region, who have become a strong support for national networks. We have several indicators in sight, all of them showing how ALICE is successfully being carried out, but, can we say the project has attained all its objectives?

Undoubtedly, we are not wrong when we state that the ALICE project represents one of the most transcendental collaboration initiatives with Latin America developed by the European Commission; we can also say with certainty that to date the project has exceeded the initial expectations. We have RedCLARA, which includes 11 national networks with an active participation on the network - Argentina, Brazil, Colombia, Chile, Ecuador, El Salvador, Guatemala, Mexico, Peru, Uruguay and Venezuela - and with Bolivia and Panama just about to fully join the Latin American network.

Costa Rica is solving internal difficulties, which we hope will be satisfactorily overcome so that the country soon joins the network, same as its neighbours in Honduras and Nicaragua. Cuba and Paraguay's integration may take a bit longer, but we are certain that sooner than later they will join the regional order. Although their topology may and must be improved to consolidate their stability and efficiency, national networks are already there. This is a resounding success for ALICE since the creation of a network was one of its main goals. However, we will be able to say that the project has fully met its goals only when the regional networks, particularly the younger ones, have reached a degree of stability, order and maturity which allows for their self-management and which guarantees their subsistence. The support received from the Inter-American Development Bank through their Regional Public Goods takes on capital importance here, since this support has been rightly targeted precisely to develop, during the next three years, regulatory frameworks of reference, business plans for networks, collaboration and technical training actions, and a series of other instruments aimed at strengthening networks, especially those which are less solid and stable.

Thus, we are clearly in a breaking point, a moment in which to achieve transcendence, to become creators of content and to grow as a network. But we are also in a stage where the new and still incipient national advanced networks require as much support as possible for their consolidation. In turn, these young networks, rather than placidly resting on the hope of receiving external support, will have to multiply their efforts in order to become real driving force for their countries' development and to get the rest of the world to turn to them in search of their academic offer.

It will be CLARA's responsibility to continue growing, but making sure the younger networks take part in its evolution until these networks have their own meaning. The ALICE and CLARA projects are making it possible to bridge the digital gap, but the biggest effort corresponds to each emerging network in the region. They will have to overcome a series of exclusion gaps which are even harder to bridge, and this is a task that requires longer than the 3 years initially established for the execution of the project.



Dai Davies, General Manager of DANTE:

## “We feel a real sense of achievement that this is becoming a reality”

The title of this interview, actually the words of Dai Davies, are not just words; they cannot be blown by the wind, because they are not only supported by the feelings of those who have been involved in the ALICE Project and in CLARA since their very beginning, but also by facts that are demonstrated daily with numbers -of projects and researchers using and profiting from the benefits of the RedCLARA network- that this one is a story of success. Yes, success, and a great one, as great as to have ALICE highlighted by the European Commission as a reference model for those beginning to build research communities in other parts of the world.

Simon Watts, Relaciones Pública de DANTE.

Once the news of the extension of the co-funding from the European Union for the ALICE project -responsible for the RedCLARA network- until 2008 was spread, lots of smiles and of congratulations messages from Europe to Latin America, and from Latin America to Europe, and to other continents crossed through the network. Everybody in ALICE, CLARA, DANTE and the related networks and institutions was happy. Obviously! A new year means new goals to be achieved, new challenges, brand new dreams that can come true. But of course, the extension would not be enough without the reinforcement of the role that CLARA must play now by expanding its responsibilities for the running and administration of the network and by increasing its staff.

Success, achievements, new goals and roles: these were the clues of the interview that the DANTE PR team held with Dai Davies, one of the two General Managers of DANTE, and in Europe, with Cathrin Stöver, a leading actor in this story of success that is entitled: ALICE.

The project extension is great news for Latin American Research and Education. It also sees CLARA assume more responsibility for running the project. How do you feel about handing this over?

DANTE welcomes the increasing role that CLARA will play in the future administration of RedCLARA. The creation of CLARA and its eventual independence from DANTE was a major aim of the ALICE project, and we feel a real sense of achievement that this is becoming a reality. CLARA's

growth is the logical next phase of building a sustainable regional research network community that is an integral part of global and local projects. All the partners, including the European Commission, see CLARA's independence as evidence of ALICE's success, and the regional partners now have the infrastructure and skills to strengthen their own research and education community. Much work still needs to be done to secure the sustainability of networking in the region, to ensure that the benefits of advanced connectivity are shared with neighbouring countries and with the wider society.

What has ALICE achieved in terms of integrating Latin American researchers into the global community?

Thanks to RedCLARA, Latin American researchers are now an integral part of the global research community. It is well known that high speed research networks encourage cross-border collaboration, creating a global scientific community that pools resources for more efficient and effective research. RedCLARA's interconnection with Europe has created new opportunities for Latin American researchers to work with their European colleagues. I can cite a number of EU-LA projects that have resulted, including EELA (e-Infrastructures shared between Europe and Latin America). EELA is working in close collaboration with a number of EU grid projects, including EGEE, EU-MEDGRID, BalticGrid and SEE-GRID.

Established European projects are also feeling the benefit of connectivity to RedCLARA and access to Latin American

partners. For example, the ExpreS project, which is working towards a real-time e-VLBI environment, now has partners in Chile to add to its collection of telescopes connected throughout the world. Another example is that the Argentinean NREN is a partner in AugerAccess. This initiative is integrating the Auger Observatory in Argentina with European Research Institutions.

There are also regional environmental issues which have a wider impact on the world. The effects of the El Niño phenomenon are not restricted to Latin America. National expertise can now be shared at a regional and international level. Other issues such as biodiversity loss in the Amazon and the resulting effects on climate change have a significant impact that extend beyond the region. RedCLARA equips Latin America researchers and scientists with an advanced infrastructure for international collaboration. Global challenges require global facilities, and RedCLARA provides regional access to an increasingly global research community. In addition to its link to GÉANT2 in Europe, RedCLARA interconnects with the United States, and is looking to peer with the TEIN2 network in Asia. Latin American researchers are definitely now part of a wider community of collaboration.

RedCLARA has also done much to support regional research networking in Latin America. What are your thoughts on this?

Even viewed from a distance in Europe, it is clear to see the regional benefits that have been brought about by the ALICE project, and by CLARA. The creation of RedCLARA stimulated the development of many NRENs in the region. Networking organisations in Guatemala, El Salvador, Ecuador, Nicaragua, Peru and Colombia were all formed as a result of the impetus generated by the ALICE project. Now we are seeing the results of CLARA-led training courses and workshops funded by ALICE. CLARA has developed courses for university networking engineers to share knowledge and expertise on topics including Network Deployment, Security, IPv6, VoIP and video-conferencing. These are vital steps towards building a sustainable future for Latin American research networking. We can see that there is a real desire in the region to educate and share best practice amongst a growing community of networkers.



How would you like to see the benefits of RedCLARA connectivity being extended?

We have already seen the connection of twelve countries in the region to each other and to Europe. But there is always more that can be achieved. In the future, we hope to see the deepening of research collaboration with other Central American and Andean countries that extends the geographical reach of RedCLARA. It is important that the whole of the region reaps the benefits of research collaboration. Further funding beyond 2008 is needed to ensure that RedCLARA continues to grow and secure the sustainability of research and education networking in the region.

How do you think the European Commission view the ALICE project and RedCLARA?

The European Commission have supported the development of Latin American research networking from the very beginning. Throughout the ALICE project, we have received invaluable support, guidance and co-financing (80%) through their @lis programme - without this, we could not have realised the vision of RedCLARA. They have expressed their satisfaction with our progress throughout the project's lifecycle. Only recently, they highlighted ALICE as a reference model for those beginning to build research communities in other parts of the world. That's a real endorsement that the project partners should be proud of.

You mentioned that you believe that research networks encourage international scientific collaboration. Do you think they can benefit the wider society in terms of supporting education and development, alleviating poverty and tackling health problems?

I do believe that advanced ICTs have a role to play in all these areas, which brings benefit to the wider community. RedCLARA supports e-Learning projects such as @lis-TechNet. This has created an international e-Learning environment that spans Europe and Latin America, with partners in Mexico, Chile, Costa Rica, Italy, Spain and the UK. The project enables students and researchers to gain hands-on experience of cutting-edge web and internet technologies.

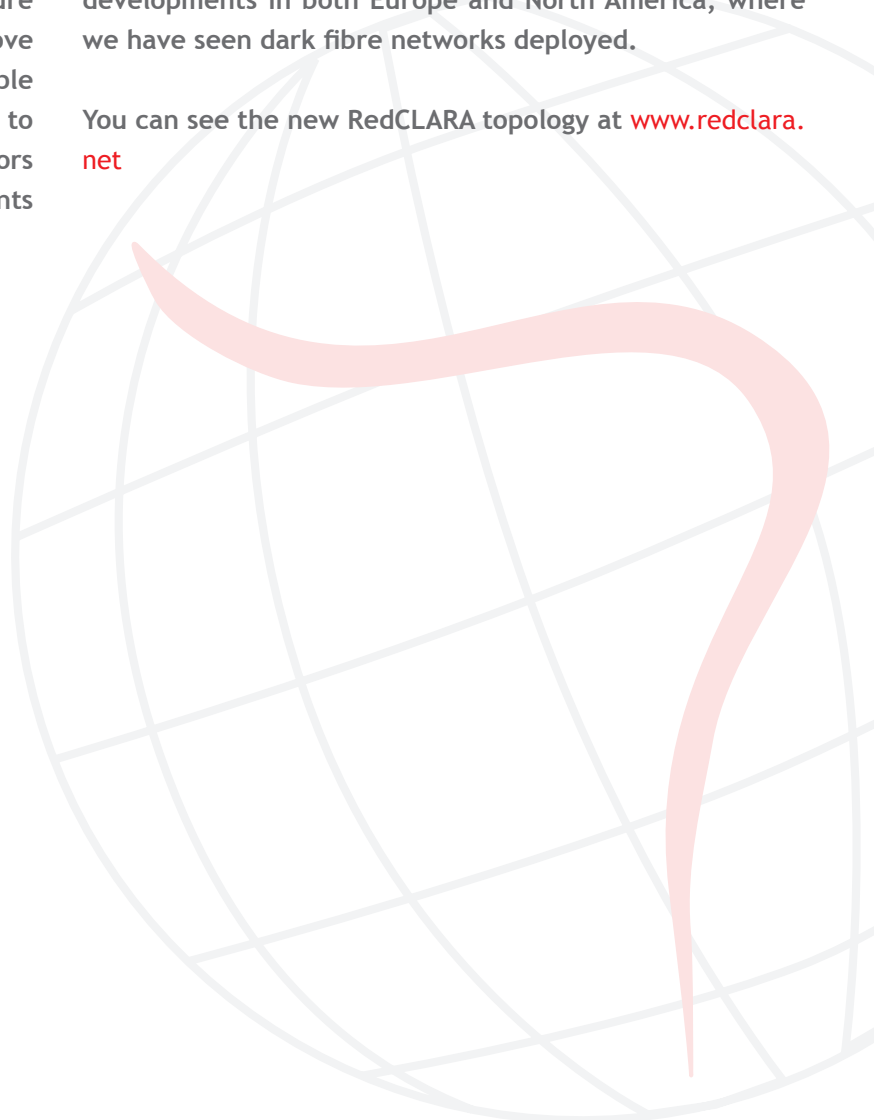
Numerous studies have shown that ICTs can help alleviate poverty. In this respect RedCLARA is a major enabler of ICT technology, providing the underlying infrastructure that supports a range of ICT projects working to improve healthcare, education and development. Take for example the T@lemed project. This provides e-Health services to isolated regions of Brazil and Colombia, allowing doctors to remotely diagnose conditions and prescribe treatments

to patients, despite being separated by thousands of kilometres. T@lemed is also testing services helping to combat malaria and tuberculosis in Brazil. These services would not be possible without network connectivity - whether at a regional, national or international level.

How is the RedCLARA topology changing?

ALICE delivered good levels of connectivity for reasonable prices in a less than favourable telecoms market. In the four years since the original tender, greater competition has increasingly opened up the Latin American market, and this has created new opportunities for the provision of the RedCLARA infrastructure. CLARA will assume responsibility for new tenders, as part of its growing role in the management of RedCLARA. In addition, the project is researching dark fibre availability in the region, to offer faster, more flexible services to users. This mirrors recent developments in both Europe and North America, where we have seen dark fibre networks deployed.

You can see the new RedCLARA topology at [www.redclara.net](http://www.redclara.net)



# Bogotá was CLARA in June

“Trust, confidence and commitment to carry on, no matter what.”. With these words Cathrin Stöver, ALICE Project Manager, sums up her impressions on the scenario shaped by ALICE, CLARA and RedCLARA after the CLARA-TEC and ALICE-CLARA meetings and the Advanced Routing Training, held between 25-29 June in beautiful Bogotá, which some people call “everybody’s city”.

The meetings were organised by RENATA, the Colombian National Academic Network for Advanced Technology, which acted as host of the event.

María José López Pourailly

On the 25 June in Bogotá, capital city of Colombia, the activities of the ALICE-CLARA group began with the CLARA-TEC meeting, which brings together engineers from the national networks that constitute CLARA.

The progresses made by the different work groups were presented at the technical meeting, and we talked about this with Lara Machado, Innovation Manager at RNP (Brazil) and Coordinator of CLARA’s Training Work Group. Lara also coordinates the CLARA-TEC meeting, together with Michael Stanton, Head of Innovation at RNP and leader of CLARA’s Technical Commission.

In general terms and considering the presentations, how do you evaluate the work done by these groups? Which ones do you think have made more progress, and why?

The work groups carry out a very important task, that of creating in RedCLARA a community related to advanced network applications. The coordinators have the role of motivating participants, breaking cultural barriers and encourage voluntary collaboration. Considering all the difficulties, I think the groups have made progress since the Veracruz meeting, when they were created. In this meeting, those present actively participated during the presentations by the WGs [Work Groups], showing great interest in the topics presented. The Videoconference Group has advanced more than the others because their topic motivates participants. The IPv6 Group has also advanced a great deal.

During the last six months, the two most relevant topics discussed in CLARA-TEC’s mailing list have been related to Videoconference and IPv6. What do you think this is happening?

In the case of the Videoconference Group, the European Union required the coordination for the implementation and use of the ISABEL software for the event held on 7 March [FP7 Information Day], and this was a decisive factor. As for the



IPv6 Group, their Coordinator is regularly sending information and proposals through the mailing list to be discussed among all those in CLARA-TEC.

Regarding the functioning and operation of RedCLARA, which were the main concerns presented in Bogotá by the technicians from the CLARA networks?

The main concerns had to do with the networks’ business model in terms of commodity network traffic and that of academic networks. Within CLARA we have different models, depending on each country. This concern is related to the issue of how to provide access for users in a transparent way.

According to your own experience and observations, which would be the topics on which the technicians from the networks connected to RedCLARA should focus their concentration, interest and efforts?

They should focus on the traffic issue and also on promoting the use of the network by researchers through advanced applications. It is also important to study new ways of access in the last mile and observe the use of optic technology to expand the networks.

How many people participated in this meeting? Were there representatives from all the networks?

There were 36 people from Innova-T, ADSIB, RNP, CLARA, REUNA, RENATA, CEDIA, RAICES, RAGIE, CUDI, RedCyT, RAAP, DANTE, RAU and REACCIUN.

We also wanted to know Cathrin Stöver's opinion about the CLARA-TEC meeting, of course. We asked the ALICE executive which were the high and low points of this meeting. This is what she answered: "The highlight was the high level of technical discussion in which all engineers participated. It showed that the LA NREN engineers are forming an ever closer community. I would not yet call it a black spot, but I believe that participation in the CLARA technical working groups needs improvement."

When asked about the vision which these engineers should have regarding the importance of RedCLARA for their countries and the region, Cathrin Stöver's answer is tremendously positive and concrete: "Absolutely. They have the vision of the importance of RedCLARA and they are committed to their responsibility in the project."

### Training on Advanced Routing - 26-28 July

The CLARA-TEC meeting was followed by the Training on Advanced Routing, which was coordinated by Iara Machado and carried out by Eriko Porto (RedCLARA Engineer and Coordinator of CLARA's Advanced Routing WG), Carlos Altamirano (CUDI - Mexico), Hans Reyes (Responsible for RedCLARA's NOC and Coordinator of CLARA's Measurements WG) and Guillermo Cicileo (Coordinator of CLARA's Multicast WG and Technical Director at RIU - University Interconnection Network, Argentina).

To find out more about this training we talked to Iara Machado and Guillermo Cicileo:

How many people participated in the training and where were they from?

Iara: 44 people participated in the training, all of them from the regional networks of Colombia, Argentina, Bolivia, Brazil, Ecuador, El Salvador, Guatemala, Mexico, Panama, Peru and Uruguay.

What is the reason for doing training on Advanced Routing? What is the importance of this topic for the technicians in our networks?

Iara: This topic was mentioned in the surveys I did in the Training WG, then CLARA's Technical Commission approved this training. Additionally, this training covered topics of great interest for the NREN: IPv6, Multicast, BGP, IS-IS and OSPF.

What was the level of knowledge of the participants in relation to the topics addressed during the training?

Guillermo: Knowledge about IP and basic routing was a requirement to participate in the training. Most people knew about internal routing protocols such as OSPF and even IS-IS, which were dealt with at the beginning of the course. However, more advanced topics such as BGP, Multicast and IPv6 turned out to be more novel and were given more attention.

What were the main doubts in relation to the topic of the training?

Guillermo: The major interest of the participants was how to organise routing in each particular institution, mainly how to handle academic and commercial traffic in the same network. For this reason we organised a panel on the last day, where different models were presented and some of the participants had the chance to present the characteristics of their networks and providers, analysing the alternatives to provide the service for the user in a transparent way.

How do you evaluate the result of the training?



Iara Machado



Guillermo Cicileo

**Guillermo:** In general terms, the training was attended by a lot of people, about 50 people from different countries and with a great degree of participation by the staff from Colombia's regional networks. Apart from the theoretical knowledge, it was possible to put the concepts presented into practice, making use of a remote laboratory which the Tamaulipas University in Mexico provided for this CLARA training and which we accessed through RENATA and RedCLARA.

Apart from being a successful experience from the point of view of building human resources in the region, it made it possible to address particular problems and issues of each network and to collaborate in the creation of contact networks among the technicians from different countries.

**lara:** The training was very positive. This is reflected in the answers in the feedback survey conducted, which showed the following:

- Organisation of the course: 54% excellent, 41% good, 5% reasonable.
- Materials provided: 43% excellent, 51% good, 3% reasonable, 3% deficient
- General evaluation: 46% excellent, 49% good, 5% reasonable.

Obviously, each training course is observed by DANTE and ALICE; this is why we asked Cathrin Stöver about the relevance this kind of training has for them and the answer was conclusive: "The building of a strong LA NREN engineering community is one of the central objectives of the ALICE project. Advanced networks need engineers that are on top of technical developments. Therefore from the ALICE perspective the CLARA-TEC meeting as much as the training was of very high importance and the increasing number of participants in the training workshops that have been offered over the last three years shows that we are on the right track."

#### **ALICE-CLARA Meeting, 28-29 May**

The Bogotá meeting was deemed to be the least controversial meeting since the onset of Alice and CLARA. This could not be different, considering the feeling of being on the right track and with everything in its right place, is shared by all members of the project and the network.

As usual, the reports of the NEG (Network Engineering Group), the NOC (Network Operation Center) and the ALICE project were presented, as well as the advances made in CLARA, the tasks carried out in Communications. The contributions by the NREN were analysed, as well as the budget and,

certainly, the future beyond March 2008, when the funding for ALICE comes to an end. There were also reports from the newer networks. In short, everything seems to be clear (CLARA means 'clear' in Spanish).

It is important to point out that we have scheduled a last meeting before the end of the ALICE Project. This meeting will be held in Panama City in November.

With the end of the ALICE in view and considering the future which CLARA must face, we decided to finish this article talking about these issues with ALICE Manager.

About the ALICE-CLARA meeting, so far there's only one more meeting ahead before the ending of the ALICE project (or of it's budget), how do you think that these meetings has evolved in time? Are there new subjects arising or the discussions are the same that in the very beginning?

The discussions have changed over the years just in line with the state of development in the project. In the beginning there was planning, that we had to battle very many operational issues, regarding the implementation and the financing. Today, we are planning again, but we can build this planning for the future onto what has been built in the last five years.



**Cathrin Stöver**

**What's the overall picture that this last meeting left in your mind about ALICE, CLARA and RedCLARA?**

Trust, confidence and commitment to carry on, no matter what.

**What will be the following (and I must say last) steps for the ALICE Project in the months that we have ahead?**

The last couple of months in ALICE will mainly be needed to tidy up the project and to wind the activity down. We will need to keep fighting for the continuity of CLARA and RedCLARA and will concentrate on this in the coming months.



# CLARA publishes information about the NOC

The registry of operation reports at RedCLARA's Operation Centre (NOC) since November 2006 to date can now be accessed by the technical representatives from CLARA's member networks, who have the key aspects of its use in the Intranet. This information, plus all information related to the NOC, is available in <http://www.redclara.net/en/noc.htm>

María Paz Mirosevic

The NOC is in charge of the administration, control, monitoring and daily operation of all the physical and logical infrastructures which constitute RedCLARA's backbone. Its mission is to ensure high performance levels in the operation of the network and its interconnections. This is why it is vital for CLARA's member national networks to have a registry of its operations, and these will be available as of June in CLARA's website.

Physically, the NOC is located in Mexico City and is directed by that country's NREN, CUDI (University Corporation for Internet Development). Regarding its functioning, the NOC depends on CLARA's Technical Committee, whose purpose is to keep the Latin American network in the borderland of advanced services in IP networks. This objective must be achieved in coordination with the Network Engineering Group, NEG.

The following documents are public in CLARA's website:

- RedCLARA's Operation (<http://www.redclara.net/noc/doc/OperacionRedCLARA.pdf>)
- RedCLARA's NOC (<http://www.redclara.net/noc/doc/noc-clara15-06-05.pdf>)

The monthly reports on the NOC Operation, with access passwords for the members of CLARA's Technical Intranet, are published in the website in the Documentation subsection. These include four items: CLARA's management, administration of configurations, reports and failures follow-up, and the graph showing the traffic of all the national networks which constitute CLARA as well as the international links.

Access to the NOC tools, failure reports, live statistics, documentation and contact information can be found in the navigation menu of the NOC section in CLARA's website.

# Successful First Global Forum of Virtual Research Communities – FP7

The 1st Global Forum of Virtual Research Communities – FP7 – was held on 12 July. The event, which was developed through the ISABEL Platform and was broadcasted live via Real Player (thanks to REUNA's collaboration), was attended by numerous education institutions and research centres, who presented their proposals for the call for FP7 in two sessions: one for Europe and one for Latin America. This event is part of the initiative by the European Commission DG for the Information Society, Unit F3 "GÉANT and e-Infrastructure".

María Paz Mirosevic

The 1st session for Latin America of the Global Research Communities Virtual Forum - FP7 began at 16:00 (GTM + 1) on 12 July. The opening ceremony was done by Mário Campolargo, responsible of the European Commission's GÉANT and e-Infrastructure Unit, and Juan Quemada, professor at the Madrid Polytechnic University and creator of the ISABEL Platform, a technology which was used to conduct the Forum ([http://isabel.dit.upm.es/mediawiki/index.php/Global\\_e-Infrastructure\\_Info\\_Day](http://isabel.dit.upm.es/mediawiki/index.php/Global_e-Infrastructure_Info_Day)).

Before the beginning of the Networking sessions, where 15 projects were presented, Campolargo made a presentation on the Role of e-Infrastructures as support of the new Science Paradigm. In his presentation he highlighted the importance of the concept of Virtual Research Communities as a new view of science for future international collaborations. Additionally, he stressed the transcendence of GÉANT2 as creator of RedCLARA for Latin America, as well as that of the EGEE and EELA projects, which have been decisive for the advance of Grid projects in this part of the globe. His presentation concluded with a brief explanation of the FP7 second call for research and infrastructure.

The next speaker was Klaus Pendi from the European Commission, who made a brief general introduction to the rules for participating in FP7. In his talk, Pendi explained the importance of international collaboration in FP7, the call, who can apply and the objectives of the programme. He also invited Latin American organisations to participate and ended his intervention with a general revision of the previous calls and mentioning how participation from this region has improved since FP5.

According to the agenda, there were 15 presentations in the Networking session. The organisations which participated with their corresponding projects were:

- Polytechnic School at San Pablo University (area of computing, engineering and digital systems).  
Project: Design of an infrastructure made up of heterogeneous networks and devices. This takes into account the mobility, the quality of the end-to-end service and the privacy in distributed environments.
- Research Centre for Energy, Environment and Technology, CIEMAT, Spain  
Project: EELA, e-Infrastructures shared between Europe and Latin America.
- Bucaramanga Autonomous University, Colombia  
Project: Artificial Cloning Technology based on Sensors and Controllers in Neutral Networks and Genetic Map.
- CENAIM-ESPOL Foundation, Ecuador  
Project: Globalisation of an Operational Epidemic Alert System for the Ecuadorian Shrimp. To expand the action of the SAEM.
- University of Panama and REDCYT Panama  
Project: Collaborative Services in Integrated Fixed and Mobile Networks
- Pontifical Catholic University of Peru  
Project: Sustainable use of bio mass in the search of metabolites and compounds of industrial interest.
- TIGO Geodesic Observatory, University of Concepción, Chile  
Project: Connectivity of Chilean NREN
- San Marcos National Superior University, Peru  
Project: A proposal for Systems for Knowledge Management in Public Health with Telemedicine

applications.

- INICTEL-UNI, UNMSM, UPCH, CASP (Daniel Díaz), Peru  
Project: e-Infrastructures for the integration of people with different abilities and patients with chronic illnesses.
- Southern European Observatory, ESO, Germany  
Project: Presence of ESO in Latin America and in the Framework Programmes.
- San Marcos National Superior University, Peru  
Project: Implementation of a Regional System of IP Telephony for Latin American academic and research communities by making use of the CLARA network infrastructure and with collaboration from partners throughout Latin America (LA-NRENs) and Europe.
- Computer Science, Italy  
Project: Presentation of ERINA
- Catholic University of Colombia - NCI Grid Colombia  
Project: Design of processing infrastructure and tests of a prototype of National Grid Computing on RENATA.
- School of Geology, Mining, Oil and Environmental Engineering, Ecuador  
Project: Application of phyllosilicates and bacteria in water and soil contaminated by hydrocarbons. Neutralisations of tetra-ethyl lead units from state refineries in Ecuador. Implementation of biostratigraphy to date traces of fission and petrophysics analysis.
- Central University of Ecuador  
Project: Implementation of an International Technology Centre in Galapagos.

During the final interventions, Mario Campolargo stated he was impressed by the presentations and although he said he was sure many of these initiatives will not be funded by the FP7 as they are local initiatives, he summoned those who are involved in EELA and RedCLARA to act as mediators for these successful ideas. “I am deeply admired at the amount of Grid initiatives presented, this is very positive because we have a guarantee of future collaboration”, he expressed.

Florencio Utreras, Executive Director of CLARA invited institutions to look for opportunities to develop successful proposals for FP7, and told the organisations which are interested to visit CLARA’s website to find support.

Then, Rafael Mayo from CIEMAT, Spain, said that EELA is also offering to act as mediator for Latin America. “In EELA we have information, those who are interested can write to us since we are trying to encourage Grid initiatives. We are offering help and experience”, stated Mayo.

The forum ended with a brief farewell ceremony for the organisations connected to the videoconference.



# Colombian government and universities created the RENATA Corporation

On May 2nd, Colombia's Communications and Education Ministries, Colciencias and the country's leading university networks created the RENATA Corporation, which aims to develop the infrastructure of a high speed network, as well as to articulate and facilitate actions to carry out collaborative projects in education, innovation and scientific research in Colombia.

María Paz Mirosevic

The new RENATA Corporation gathers together six national networks, which group around 50 of the most important universities in Colombia and independent research centres, which, in turn, may join forces to do collaborative research in a virtual way making use of international networks such as RedCLARA, GEANT2 and Internet2, among others.

From now on, Colombian universities will be able to exchange data, share large databases and develop collaborative projects, which are important goals for the implementation of Grids projects and the integration of RENATA - Colombia's connection to RedCLARA- into the EELA project. The idea is to provide Colombian knowledge with a technological platform with an initial 10 megabits capacity per second for the exchange of information.

Colombia's Education Vice Minister, Gabriel Burgos, reaffirmed the commitment of that ministry towards obtaining funds for the development of research projects based on the use of RENATA.

The Director of Colciencias, Juan Francisco Miranda, announced that his entity will house the headquarters of the Corporation and stated that the joint commitment is to make RENATA available on the desktop of every Colombian researcher and academic.

During the launch of the Corporation Martha Giraldo, General Coordinator of RENATA, made a presentation on the Network's advances and projections.

At the same time, RENATA's current President of the Directive Committee, Héctor Rendón, stated that the Corporation faces two challenges: the first is to get the academic community to take full advantage of RENATA and the second is to achieve the involvement of the private industry to finance the network as of 2011.

The constitution act of the RENATA Corporation was signed by the Ministry of Communications, the Ministry of Education, Colciencias, the Antioquean University Network - RUANA, the Bucaramanga Metropolitan Area Network Corporation - UNIREDO, the High Speed University Network of the Cauca Valley - RUAV, the Popayán University Network - RUP and the Metropolitan Universities of Bogotá University Network - RUMBO. The Barranquilla Metropolitan University Network - RUMBA, will join RENATA in the next few days.

Upon signing the Corporation constitution document, the Minister of Communications, María del Rosario Guerra de la Espriella, announced that her Ministry will support RENATA, via the Connectivity Agenda, with a contribution of US\$ 9 thousand millions until the year 2011, to co-finance the connectivity and support the human resources who will lead the entity. "RENATA is fundamental to enhance Colombian research and academic development. This shows us that the country is open to the world in this area, thanks to information and communication technologies", stressed the Minister.



Authorities present at the launch of the RENATA Corporation.

On May 17th:

## CLARA celebrated World Telecommunications Day and Bolivia its connection to RedCLARA

On May 16th the world celebrated the Telecommunications day – date established by the International Telecommunications Union, ITU- and Red CLARA and GEANT2 rose to the occasion by applying the networks' interconnection to bring Europe and Latin America together in a round table where they discussed “ICT in Science, Technology and Education”. This was carried out by means of the videoconferencing platform ISABEL.

On the same day, Bolivia's Information Society Development Agency, ADSIB, gathered to have a more intimate celebration where, together with commemorating the Telecommunications and Information Society, they held the official launch ceremony of the national Bolivian network's connection to RedCLARA.

María Paz Mirosevic

Casa de America in Madrid (Spain) was the host to the event which on May 17th, along with celebrating the World Telecommunications and Information Society Day, brought together Spanish, Peruvian, Mexican and Chilean specialists on advanced networking and ICT (Information and Communication Technologies) for Science and Education at the round table “ICT in Science, Technology and Education”, which started at 4:30 pm (Madrid time). This round table was followed by another one about the 50 years history of the Spanish Television Network.

The round table on ICT in Science, Technology and Education included some representatives from CLARA, as well as from national networks and Latin American education institutions, who had the opportunity to share with the audience and highlight the work done by the organizations they are part of.

The people who participated in this round table are: Florencio Utreras, CLARA Executive Director, Daniel Díaz from RAAP (Perú), Fernando Muro from CUDI (Mexico), Juan Quemada, in charge of the ISABEL Platform - Madrid Polytechnic University, Carlos Silva from the Telecommunications section of the Pontificia Universidad Católica del Perú-PUCP, Miguel Barroso, Director of Casa de America, and Francisco Tirado from UCM.

### Bolivia makes progress

In conjunction with the Casa de America event the Bolivian Information Society Development Agency, ADSIB, celebrated two big events: the World Telecommunications Day and the official launch of their national network's connection to RedCLARA.

The meeting, which was held in the Hall of the Vice-presidency of the Republic, stood out as a day of conferences related to the Internet and its use in the country's research and

education. The activity was attended by the Vice Minister of Science and Technology, representatives from the Ministry of Education and Culture and the Vice-presidency of the Bolivian Republic.

To celebrate the launch of Bolivia's upcoming connection to RedCLARA, Eriko Porto, network engineer from CLARA, made a presentation on the connections of RedCLARA, the extension plan of the ALICE Project, the Contingency Plan of RedCLARA and the Collaboration Projects which are currently being developed and which operate on the advanced Latin American network.

Other presentations made during the ceremony, which was broadcast live online, were:

- Internet I -Internet's First steps in Bolivia
- Internet online - Virtual Academic Services
- The future of the Internet in Bolivia's Public universities
- Scientific Information for Research
- Online Research Information Strengthening Programme
- Social Inclusion through the implementation of Community Telecenters
- The Armed Forces in the Digital Inclusion
- Benefits and Limitations of the Inclusion of the Internet in Society
- Experiences of native communities in the use of the Internet as a Development tool.
- Opportunities of the Internet as an information and social communication tool
- Electronic Government in La Paz City Council
- Launch of Institutional web sites
- Declaration of the Internet and the Information Society Day in Bolivia.

The documents from every presentation are available at the event's web: [http://www.diadeinternet.bo/index.php?option=com\\_frontpage&Itemid=1](http://www.diadeinternet.bo/index.php?option=com_frontpage&Itemid=1).

# Scientists from the UNAM will participate in the construction of the Large Hadron Collider

Researchers from the National Autonomous University in Mexico, UNAM, Academic Partner of the University Corporation for Internet Development in Mexico, CUDI, which is in turn member of CLARA, will send a particle detector to Geneva (Switzerland) to be incorporated into the Large Hadron Collider, LHC, a particle accelerator which will simulate the conditions existing when the universe was born.

María Paz Mirosevic

Large Hadron Collider, LHC, is the name of the instrument which has been built by eight thousand scientists from 32 countries to simulate the conditions existing when the Universe was born.

The mechanism has been defined as a particle accelerator and has been installed at the foot of the Swiss Alps in the outskirts of Geneva and near the Rhône, in a huge tunnel 27 kilometres long, located underground at a depth of 100 metres. Last April, in this place, defined as the coldest spot of the Universe (“CERN’s big chill”), the scientists managed to have a 3.3 section of the LHC taken to the chilling temperature of  $-271^{\circ}\text{C}$ , barely two degrees above the least possible temperature and even colder than that found in outer space. Why these unusual temperatures? Very simple: so that the simulations and experiments conducted with the LHC take place in a suitable environment. The  $-271^{\circ}\text{C}$  section corresponding to the 7-8 Sector (only the eight part of the collider) is today the world’s largest superconducting facility cooled by liquid helium and in the future the entire 27-kilometre tunnel will have to drop its temperature to reach the same  $-271^{\circ}\text{C}$ .

The LHC has two thousand high power magnets to accelerate and confine a beam of lead nuclei so that the crash against other nuclei of lead atoms. Each nucleus-nucleus collision will release two spheres with 82 protons and 82 neutrons each, which will release eighty thousand bits called quarks and gluons. That “quarks and gluons soup” is the most primitive state of the matter.

To make this instrument work, it is fundamental to have a particle detector which helps measure protons and neutrons when they break. This is why a group of Mexican scientists from the UNAM who are part of this project have been responsible for the construction of this key part of the accelerator, called V0a (V-zero-a). This detector, which took four years to be built, will be installed in one of the four points in the tunnel, specifically in a nucleus of sensors called ALICE (A Large Ion Collider Experiment) and will be definitely placed in November this year.

This initiative is coordinated by the European Organisation for Nuclear Research (CERN).

More information on the Large Hadron Collider in the URL <http://public.web.cern.ch/Public/Welcome.html>

## Belief-EELA Conference:

# Connecting today's Knowledge for Tomorrow's Value

The BELIEF-EELA Conference was held between 25-28 June in Rio de Janeiro, Brazil, and was attended by several European and Latin-American actors 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

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.



The conference featured presentations by experts who apply 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 Gentsch 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 on 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” on industrial activities in the Amazon. The session on 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 Veltamn 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 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 NGI. In the EELA meeting, Bernard Maréchal 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.





**Yannis Ioannidis, Athens University, Greek:**

## **Latin America is invited to participate in the e-Infrastructures Projects**

**In Rio de Janeiro, Yannis Ioannidis, researcher of the University of Athens (Greece), spoke with CLARA and told us about the Grid projects that the institution in which he works is carrying out, particularly interesting in the Health area. At the end of the interview he invited all the Latin-American institutions to search for the different alternatives that exist in order to be a part of their projects, taking advantage of the connection to the RedCLARA infrastructure.**

One of the panelists of the Belief-EELA Conference in the Biomedical subject, was the researcher Yannis Ioannidis from the University of Athens, Greece, expert in data management, Query processing and optimizing in distributed architectures, data integration, data base personalization, digital libraries and scientific and cultural information systems. We spoke with him about the most important Grid Projects that he is developing with his groups in Greece and about the possibilities of integration that he envisions with the countries that are already connected to RedCLARA.

### **Yannis, which are the Projects that you presented in the Belief-EELA Conference?**

I am involved in several projects in Europe, but I come here to present the Driver Project, the Diligent Project, and the Health e-Child Project.

### **Can you talk about the Driver Project?**

Driver is trying to generate space in European repositories. Every institution (10 partners) has their own repository (70 repositories). The institutions generate repositories, countries take all of them and make repositories clusters, and Driver is taking the countries and came up with the European initiatives of repositories.

The goal of the project is eventually to have global classes of repositories, including repositories of Latin-America and of other parts of the world.

The University of Athens, specifically, is building a measure part of a software that can keep all these

repositories, many libraries are involved, and the universities with the repositories. The goal is that from any place of the world you will be able to access any information in any repository in the world.

### **And about the Diligent?**

About Diligent, is trying to develop technologies for more ecological projects, but it does this on top of the Grids; around the world now are built electronic infrastructure and the Grid is the major topic. We are now creating a software that handle hugest Grid to do something similar to Driver with many digital libraries and digital repositories that are very similar. With the Grid we can not only can collect information but also exchange and generate new information, because the Grid connect thousands of computers around the world and we can use those computers to generate more knowledge. So we are trying to develop technology and found data and process it all together.

In this project we are 12 partners, and the University of Athens is one of them.

### **The Health e-Child Project looks very interested if we have in mind the Latin American reality. What can you say about it?**

The Health e-Child is again a project that is using the Grid, like Diligent, but it is using a software that helps doctors and medical researchers to find information that could help to solve some children diseases, and the diseases we are working with are some particular heart problems, brain tumors and arthritis.

In this project we have data in hospitals and they can collect the data, process them, compare them, analyzes them, and then the doctors can do the correct diagnosis and define the correct treatment, sometimes it helps to avoid an operation or it helps to do a better diagnose. This project have 15 partners in all Europe.

In all of these projects we are willing to collaborate with others and specially in Latin America. If pediatrics hospital are interested in the Health e-Child Project, just get in touch with me to see if we can put them in the project. Or for any other project.

If you are interested in participating in any of these projects, please contact María Paz Mirosevic ([mpmirose@reuna.cl](mailto:mpmirose@reuna.cl)).

## In Venezuela

# Universidad de Los Andes creates a portable and virtual Bioinformatics Laboratory

CeCalCULA propels the creation of a Virtual Laboratory in Bioinformatics in a single “Live” DVD, thanks to the efforts of the Free Software Unit of the Technological Park of the University of The Andes (ULA).

CeCalCULA ([www.cecalc.ula.ve/en](http://www.cecalc.ula.ve/en)), in its continuous quest for innovating in information technologies to fulfill the continuous necessities and expectations of its academic and scientific community at a regional level, challenged the Free Software Unit ([nux.ula.ve](http://nux.ula.ve)) of the Technological Park of the ULA ([cptm.ula.ve](http://cptm.ula.ve)) to produce a DVD with frequent software applications, in the area of the Computational Biology, that could be used to solve public health problems.

The answer to the challenge is a DVD -a LiveDVD (the details of this definition can be consulted in <http://nux.ula.ve>)- code-named Bio-ULAnix,

with more than 220 Bioinformatic programs installed and ready to work, “just a click” programs, freeing the end user of any worry about installation details.

Also, the DVD has information of about ten complete bacterial genomes so that it can be a source of input data for typical problems in courses of sequence analysis taught in graduate programs of Cellular Biology, Biotechnology as well as the elective course in the Interdisciplinary Academic Program (PAI: Programa Académico Interdisciplinario) of the ULA Faculty of Sciences.

The selection of the different applications in the DVD had to do with the continuous training work of CeCalCULA in the region, such as the Workshop on Tools for Sequence Analysis

with more than ten years of experience, and by supporting the needs of graduate students in Biology and Biotechnology at the University of The Andes.

Why a DVD? Bio-ULAnix will allow the academic and research community to take advantage of the great amount computational applications in Bioinformatics that have been developed specifically for the GNU/Linux Free Operating System. This, without the users having to worry

about installing and tuning their own Linux. Bio-ULAnix becomes, thus, an easily transportable Biocomputing Laboratory.

A lighter version for a regular CD or a USB memory are envisaged. However, the challenge raised in this first version was to offer to the users a complete set of integrated applications in the same work environment consolidated on the GNU/Linux operating system.

Requirements to run the DVD: To execute Bio-ULAnix a standard DVD reading drive unit is needed, and at least 256 Mb of RAM memory (recommended 512 Mb). It is essential that the machine is configured so that it can boot from the DVD drive unit. In case of doubts, please feel free to call to the Free Software Unit at the Technological Park through the telephone +58 274 2401125 or by the e- mail: [nux@ula.ve](mailto:nux@ula.ve)



Your help is welcome: Bio-ULAnix should be seen as a virtual laboratory able to cover the needs in the Computational Biology area, and particularly designed for the academic and scientific community, and for that reason commentaries, critics and formal questions on the matter are highly appreciated. Please use the forum, wiki and blogs available at the project portal <http://nux.ula.ve>, where you will also find a collection of frequent answered questions (FAQ).

Where can Bio-ULAnix be obtained: Bio-ULAnix (beta version 1r3) is going to be distributed among the cellular biology and biotechnology graduate students as well as in workshops support by CeCalCULA. If you wish to have a copy of Bio-ULAnix, please call (Venezuela, Mérida) +58 274 2401125, or by e-mail [nux@ula.ve](mailto:nux@ula.ve). Also it is possible to download the “ISO image” that allows you to generate the DVD from the Web site: <ftp://ftp.ula.ve/ulanix/bio-ulanix> and use it, with any DVD burner, to recreate to Bio-ULAnix. It is highly recommended to use always the latest available version.

Do you wish to know more about the design principles and objectives of the ULAnix DVD project? The following Web links describe the philosophy behind this important development that offer the possibility to create thematically customized environments while keeping the easiness of use. Some details in:

<http://nux.ula.ve/documentos/ulanix.pdf> [http://nux.ula.ve/documentos/Plan\\_de\\_Migracion\\_Mayo\\_2006\\_CCA.pdf](http://nux.ula.ve/documentos/Plan_de_Migracion_Mayo_2006_CCA.pdf)



REUNA invites the CLARA community to attend the

## 2nd 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.

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 REUNA's goals 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 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".

e-Science is the concept which defines those scientific activities developed through the use of geographically distributed resources which are accessed via Internet. But resources such as massive calculus and storage - those most

frequently required in the field of e-Science- cannot be satisfied by commercial Internet since they require high-speed networks dedicated to research - those usually called Advanced Academic Networks or Research and Development Networks. These and the collaborative work applications used in them are creating an ideal scenario for interaction among researchers.

In the Latin American context this kind of initiatives 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.

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 foreign 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 Kranzlmuller, 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).

Bernard Maréchal. Sub Director of the EELA Project (E-Infrastructure shared between Europe and Latin America). 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.

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.

Further information and online records at: <http://e-ciencia.reuna.cl>

Chilean NREN, REUNA, delivers:

### **The first South American e-Science book**

**“e-Science for the Chile of the Bicentennial: Experiences, Processes and Policies” is the title of the first book referred to e-Science that has been written in South America. Done by the national research and education network of Chile, REUNA, as a result of the 1st National e-Science Congress (September 2006), the book revises the alternatives of that event, and gives a broad analysis of the important e-Science ongoing projects and of the successful experience of those countries that have implanted a national e-Science Programme. The book is available for downloading, only in Spanish, in REUNA’s Website (in PDF format).**

The concrete results of the first initiative of e-Science in Chile, the First National e-Science Congress, entitled as “e-Science for the Chile of the Bicentennial: Experiences, Processes and Policies”, that was carried out in Santiago of Chile in September of 2006 (organized by REUNA), have been shaped in this first book of e-Science that is published in the country.

The main part of the book is of course referred to the event that gives the title to it, but it also has an important introduction devoted to e-Science, e-Infrastructures (Grid and Middleware), National e-Science programmes implanted in the U.K, Australia, Japan, Canada, etc., and international Grid projects. Hence, the book it is not only interesting for the Chileans scientists, academics, researchers and engineers, but also for those who are interested in e-Science and e-Infrastructures for e-Science.

The book is available in the Press Room, section Publications, of the REUNA Website, or can be directly downloaded at URL [http://www.reuna.cl/documentos/DOC2007/Libro\\_eCiencia\\_2006.pdf](http://www.reuna.cl/documentos/DOC2007/Libro_eCiencia_2006.pdf). REUNA does not only trust in the interest that this material will arise because of the e-Science analysis that it offers at an international level, but also in the seed which this experience can be in terms of encouraging the development of national e-Science programmes in the countries of the Latin American region. That's why the Chilean national research and education network has explicitly authorized the partial or total reproduction of the book, whenever the source is mentioned and that this reproduction is used to help the development of e-Science and e-Infrastructure in the region.

In terms of the First e-Science Congress, the book presents the abstract of the biographies and presentations given by the international experts that participated in it, plus some interviews where they evaluate this first Congress. The experts were:

Bill St. Arnaud: Senior Director Advanced Networks for CANARIE Inc., Canada's Advanced Internet Development Organization.

Louis O. (Bob) Hertzberger: Director of the National Virtual Laboratory for e-Science project, which is based on Grid Technology (Netherlands).

Rajkumar Buyya: Director of Master of Engineering in Distributed Computing (MEDC) Programme and Director of the Grid Computing and Distributed Systems (GRIDS) Laboratory Department of Computer Science and Software Engineering The University of Melbourne.

Roberto Barbera: Since beginning of 2005 he is Associated Professor at the Department of Physics and Astronomy of the Catania University. Technical Coordinator of the EELA project - E-Infrastructure shared between Europe and Latin America.

Tony Hey: Corporate Vice President for Technical Computing of Microsoft Corp.

Robert Woodcock: Stream Leader and Principal Software Engineer for the CSIRO Division of Exploration and Mining. SEE Grid Community Director & Computational Services Architect.

Robert Christopher Smith: Associate Astronomer at the National Optical Astronomy Observatory, Cerro Tololo Inter-American Observatory, La Serena, Chile.

Finally, the text closes with the reproduction of the Final Forum were authorities of Government agencies, the international experts and outstanding personalities of the academic and scientific Chilean scope gave their vision of what it must be done to develop an e-Science Programme in Chile

More Information at: <http://e-ciencia.reuna.cl>.



CLARA was known by the Koreans

## A story about Culture and Technology in an Asian country

On April 12th a very strange email fell in my Inbox. “Invitation to a talk at the Networked Entertainment Workshop”, was the subject. Strange, at least for me. I thought: “Mhmm, what a weird title for a spam message”. Anyway, following my curiosity –you know, curiosity is mother of big things or of big deceptions- I decided to open the email, before sending it to Trash. Two months later –in June 26th- I was giving a presentation entitled “Cyber Performing from South America to the World (Chile, Brazil and Ecuador experiences)” in the Cultural Contents Complex, DMC, located in Sangam-Dong, Mapo-Gu, Seoul (Korea), for the International Symposium on Culture and Technology 2007 that was organized by KAIST (Korean Advanced Institute of Science and Technology). God bless curiosity!

María José López Pourailly

This text was supposed to be a very informative and in a very “journalistic” style report, but what can I say, it feels awkward to talk about my own experience taking the distance that I should in order to fit into a proper informative mode. I cannot! Moreover when everything about this experience made me think about myself like Alice in Wonderland (María José in Korea... does not sound equal to Alice, of course my name starts with an M, not an A, but no matter what Seoul truly can be Wonderland). Ok, so you are aware, this is going to be more like a true story -in professional terms, a “nonfiction story”, like the Truman Capote novel “In cold blood” (without the blood and the greatness of Capote)- than an article or a report.

Now that everything is perfectly clear, I can go on.

So, after opening that first email, I was totally astonished. Why do they wanted me to give a presentation? I mean, is not that I think that I don’t have things to tell, but I’m a journalist not a network engineer, neither an expert in technologies. Then I realize that James Oliverio was the person who gave my name. James Oliverio? Who is he? (you

must be wondering), well, he is a master of masters, please, give a look to his bio in the box that has the picture of the smiley man with beard.



Culture and Technology 2007

Why does Oliverio knows me? Not because of me, of course, but because of REUNA, the Chilean NREN. Professor Oliverio has invited REUNA to virtually perform, with the Digital Worlds Institute (DWI) students and professionals and with other parts of the world, in three occasions since year 2003 and, during the same period, REUNA has done the same with him twice. So, REUNA and DWI have performed five times:

2003, April: “Original Seed”: The performance gathered dancers in Florida (USA) with musicians in the North of Chile. The DWI hosted visiting artists from Miami’s New World School of the Arts to retell a traditional Chilean folk tale with ethnic musicians in South America and theatrical performers in North America. The attendees in Chile witnessed an unprecedented cultural exchange between Florida performers and Chilean musicians during the closing session of the 3rd International Meeting “Science, Culture and Education over Internet2” (organized by REUNA). Video of the performance at: <http://www.alejandria.cl/transmisiones/cierre.rm>

2003, October: “Non Divisi”: A distributed collaborative process between participants in three continents including Korea, Chile, Florida, and Indiana. The rehearsals and performance, using Internet2 and AccessGrid, demonstrated how telepresence can effectively empower multinational collaborations in the performing arts. Video of the performance at: <http://www.reuna.cl/documentos/DOC2006/ram/m0bugane.mpg>. Documentary of the process at: [http://www.alejandria.cl/ram2/non\\_divisi\\_doc128.ram](http://www.alejandria.cl/ram2/non_divisi_doc128.ram)

2005, May: “Mask”: The DWI in Florida (USA) collaborated with REUNA in Santiago (Chile) and the New World School of Arts (NWSA) in Miami for a three-minute intercontinental collaborative dance performance. This experience involved

four dancers, one couple in Chile (dancing live in an auditorium during the opening ceremony of the 4th International Meeting “Science, Culture and Education on the Research and Development Network”) and the other couple in the USA, performing a collaborative choreography, using chroma key technology and MPEG2 over IP running in real time over the Internet2 network. Video of the performance at: <http://www.digitalworlds.ufl.edu/projects/mask/mask.mpeg1.mpg>



Chris Chafe - CCRMA

2005, August: “In Common:TIME”: bridging five continents and cultures by creating an unprecedented real-time global collaboration for the world’s largest computer art and interactivity conference in Los Angeles, California on August 1-4, 2005. “In Common: TIME” featured performers ranging in age from 11 to 68, including musical artists from the five diverse world cultures: Korean Advanced Institute of Science and Technology - KAIST (Korea), REUNA (Chile), the Australian Cooperative Research Centre for Interaction Design (at the Queensland University of Technology in Brisbane, Australia), the Digital Knowledge Exchange of Doncaster (England), the New World School of the Arts (NWSA) in Miami and the UF Colleges of Fine Arts and Engineering featuring students from the PK Yonge Laboratory School and the Millhopper Montessori School in Gainesville, Florida (USA). Video of the

performance at:  
[http://www.digitalworlds.ufl.edu/projects/CommonTime/Media/Overview\\_large.wmv](http://www.digitalworlds.ufl.edu/projects/CommonTime/Media/Overview_large.wmv)

2005, October: “Gift of the Wind”: The performance gathered young Chilean scholar students (at REUNA) with professional dancers and puppeteers of the University of Florida (USA), for an event of the University of Florida, this event was transmitted to Arizona State for the International Fine Art Deans Conference.

So, going back in time, the Symposium organizers wanted to have an idea about what was happening in Latin America in terms of cultural acts produced and influenced by technology. Naturally they ask the advice of Professor Oliverio and he

pointed REUNA and me. Knowing this it was quite easy to know what to tell to Koreans, because the presentation subject was perfectly clear. But I felt that with such an opportunity it was silly of me to leave some other great things outside the presentation, so I decided to talk about the musical virtual performance that was carried out over RedCLARA for the CEDIA launching event -which gathered Brazil (RNP), Chile (REUNA) and Ecuador (CEDIA)- and also about the Volcano Sonification within the context of the EELA Project.

So, the calendar dropped two pages and it was June. 30 hours from Santiago to Seoul -with a five hours stop in the Atlanta airport-, an evening to know some of the panelists (during a social dinner with chopsticks to get the bulgogi and the kim-chi) and it was Symposium (show) time. In the morning of the 26 of June Professor KilNam Chon (from KAIST and former APAN Chair) went to the Grand Hilton Hotel to pick us -the panelists- up in order to take us to the huge and terribly modern venue, the Cultural Contents Complex, DMC, a brand new building with great facilities.

Audience: 200 people.

Day Agenda: 10 presentations (mine, the seventh).



After the welcome, Professor Steve Dixon - Head of School of Arts at Brunel University in London, and director of the award-winning digital theatre company, The Chameleons Group, a world-leading authority on the use of new technologies in performance, and author of the most comprehensive study of the field to date: *Digital Performance: A History of New Media in Theater, Dance, Performance Art and Installation* (MIT Press, 2007) - gave an astonishing presentation entitled "Digital Performance: Past, Present and Future". When I write astonishing I'm not only talking about the video of the super technological performances he showed (for instance, actors playing in real time a piece which was directed and scripted on-line and as the performance was running by an Internet massive audience), but also because of the enormous possibilities that he showed and proved the advanced Internet and the new technologies are giving to arts, fostering creativity and changing the social experience that an art piece can be.

The second presentation was given by Christopher Chafe - composer, cellist, music researcher denizen of the Center for Computer Research in Music and Acoustics (CCRMA) at the Stanford University where he directs the centre and teaches computer music courses -, who talked about virtual performances lead by the Stanford University and how did the musicians solved the problem of time latency in order to be able to play across the net.

The sessions continued with three presentations referred to social changes, education and entertainment; in here the central focus was how the new technologies are changing the ways of social interaction.

After that it was time for the Virtual Performance sessions block, which started with the precious presentation of James Oliverio, who transmitted to the audience the main importance of

collaboration, which does not only means to respect the differences when you work with different cultures (as it is his experience), but to learn how to understand the different comprehensive modes that the artists (composers, musicians, dancers and actors) and the engineers who help the artists have. To learn how to deal with this two different "worlds", is as Professor Oliverio said, a key factor in the success of virtual performances. Also he highlighted how in the current social momentum, when the world is under the menace of war, rage and terrorism, this kind of work in arts across the world by means of technology, helps to reunite people from different religions, political ideals and cultures, around a nice and peaceful common objective: arts; moreover, arts that help us to remember the real importance of humanity.

After the applauses that James Oliverio received from the audience it was time for my presentation. I was kind of worried to be perceived as not at the level of the rest of the panelists, but I was pretty confident about the contents of my presentation, because they were the reflect of what it has been done, with a lot of effort, creativity, solidarity and a mind open to deal with technological and cultural challenges, in REUNA, RedCLARA and EELA; moreover, of what is has been done in Latin America. And that was exactly what the audience and the other panelists got and valued. And this is not nonsense or something that I invent inside my crazy head, no. How do I know this? Because of the feedback I got during the coffee break - where many Korean students came to me to ask me more about REUNA, RedCLARA and volcanoes -, and also at the end of the day, during the welcome cocktail and after it, when I was reached by the other panelists who wanted to get more information about what we are doing in Latin America with our advanced networks and if we truly want to collaborate with the rest of the world.



James Oliverio - DWI

This session ended with the presentation of Professor Dae Young Kim of the Chungnam University, who explained the DancingQ project, through his presentation entitled as “Dancing Across the Oceans: DancingQ”.

Music Performance was the subject of the final session that counted with two presentations given by professors Seung Yon-Seny Lee, from KAIST, and K. H. Kim from UC Irvine (USA).

Due to my CLARA duties I was unable to participate in the second day of the event, but this was ok, because the final results were much more than the ones that I expected: Professor Oliverio asked me to give his contact to the institutional representatives of the CLARA member NRENS in order to gain more partners for future collaborations (and I did so in the CLARA-ALICE Meeting in Bogotá); and Christopher Chafe, after asking me for more information about RedCLARA and the connected countries, was so excited about the possibility of virtual performing with Latin America, that he is already thinking of starting working in a concert. You don't believe me, well, then give a look to the email he sent to me on July 4th:



María José López Pourailly - REUNA - CLARA

“Hi Maria,  
I hope your trip onwards was great. I'm back at Stanford and would like to put you in touch with a few of our folks who would be interested in using RedCLARA for music. I wonder what's the best? Perhaps starting to think of a concert... for

that it comes to mind to do the Pacific side: Santiago, Bogota, Mexico, California. We have musicians from CCRMA at each.

Just dreaming, but for us it would be fantastic!

Yours,  
Chris”

A month has already passed since the Symposium... since Korea, and when I close my eyes I can still feel the weird sensation of being in place where you cannot read the street signs or the amusement of visiting those ancient palaces that looks like coming out of an Asian fairy tale, but most of all, what I do feel of extreme importance is knowing that the Asians and particularly

the Koreans are looking down the map, to Latin America, to find new partners to collaborate in research and also, of course, the aspiration of James Oliverio and Chris Chafe of starting to collaborate now with the CLARA members.

Yes, Seoul was Wonderland.

## James Oliverio, master of masters



El profesor James Oliverio es un compositor y creador internacionalmente conocido, educador y productor multimedia. Frecuentemente solicitado para actuar como panelista en distintos eventos, consultor en investigación, y programas de educación y de la industria. Oliverio ha establecido alianzas con instituciones a través de todo el mundo para crear “In Common Time” (ICT), una serie de presentaciones de arte colaborativa globalmente distribuida. ICT ha sido incluido en eventos en tiempo real que incluyen “Non Divisi” para Internet2, en el Centro de Convención Los Ángeles para SIGGRAPH 2005, y en la Conferencia Nacional de la Sociedad de Colegas Músicos 2006.

Ha recibido cinco premios Emmy por parte del capítulo Atlanta de la Academia Nacional de Artes televisadas y Ciencias, además de numerosas becas y comisiones nacionales (de los Estados Unidos). Entre

otros reconocimientos se cuentan el “Premio Peoria a la Creatividad” (2005) por producir la globalmente distribuida presentación de artes colaborativas titulada “Manos a través del Océano” y el premio al “Más Arriesgado y Creativo” en el Desafío de Alto Ancho de Banda en la Conferencia Global SuperComputing 2001.

El trabajo de Oliverio en presentaciones artísticas globalmente distribuidas ha sido presentado en CNN Internacional y BBC. Además de las presentaciones realizadas con sus composiciones orquestales, entre las que se incluyen las realizadas por la Orquesta de Cleveland y las sinfónicas de Atlanta, Pittsburg y Columbus, Oliverio ha producido piezas para -y en colaboración con- Jazz en el Centro Lincoln, la Filarmónica de Nueva York, el Ballet de la Ciudad de Nueva York y la Sociedad Filmográfica del Centro Lincoln.

Se ha desempeñado como Consultor Artístico en un gran número de proyectos con Wynton Marsalis, incluyendo la comisión Millennial de “All Rise”, que realizó su estreno con la Filarmónica de Nueva York bajo la dirección de Kurt Masur y tuvo varias otras puestas en escena en el Concertgebouw y en importantes escenarios internacionales, incluyendo Londres, la Filarmónica de Los Ángeles y las Sinfónicas de Boston y Chicago.

Antes de fundar y convertirse en el Director del Instituto de Mundos Digitales de la Universidad de Florida en el 2001, Oliverio trabajó como compositor residente en el Instituto de Tecnología Georgia y, también, como Director de AudioLab en el Centro de Gráficas, Visualización y Usabilidad (GVU) en el Colegio Georgia Tech de Computación. Previamente sirvió como profesor visitante asociado de Música y como Director de Tecnología Musical en la Universidad Estatal de Georgia. Hoy, es profesor de Música y Medios Digitales, y Director del Instituto Mundos Digitales.

## A G E N D A

## J U L Y

## 2nd EELA GRID School

30 July - 8 August, Merida, Venezuela

[http://www.eu-eela.org/eela\\_application\\_questionnaire.php](http://www.eu-eela.org/eela_application_questionnaire.php)

## A U G U S T

## 2nd International Workshop on Advances in Wireless Sensor Networks 2007

6-10 August, Philadelphia, USA

<http://www.iwasn.org>

## Latin-American High Performance Computing Conference

13-18 August, Santa Marta, Colombia

<http://clcar.ula.ve/>

## 30th CERN School of Computing

20-31 August, Dubrovnik, Croatia

<http://cern.ch./CSC/>

## 9th CREAD MERCOSUR/SUL Congress 2007

22-24 August Buenos Aires, Argentina

<http://www.barcelo.edu.ar>

## Second International Conference on Access to ACCESSNETS Networks 2007

22-24 August, Ottawa, Ontario, Canada

<http://www.accessnets.org/2007/>

## CoreGRID Symposium

27-28 August, Rennes, France

<http://www.coregrid.net/mambo/content/view/358/330>

## ACM SIGCOM 2007

27-31 August, Kyoto, Japan

<http://www.sigcomm.org/sigcomm-conference-current/>

## S E P T E M B E R

## International Conference on Climate Change Impacts on Tourism

7-8 September, Lisbon, Portugal

<http://www.siam.fc.ul.pt/clitop/>

## 6th UK e-Science 2007 All Hands Meeting (AHM 2007)

10-13 September

<http://www.allhands.org.uk/>

## 2nd National e-Science Congress

12-13 September, Santiago, Chile

<http://e-ciencia.reuna.cl/>

## 2nd Latin American Autonomic Computing Symposium (LAACS 2007)

12-13 September, Petropolis, RJ, Brazil

<http://www.dc.uel.br/laacs2007>

## 4th Ministerial e-Government Conference

19-21 September, Lisbon, Portugal

<http://www.megovconf-lisbon.gov.pt/>

## Berlin 5 Open Access Congress: From Practice to Impact

19-21 September, Berlin, Germany

<http://www.aepic.it/conf/index.php?cf=10>

## 3rd IET International Conference on Intelligent Environments

24-25 September, Ulm, Germany

<http://www.uni-ulm.de/ie07/>

5th Workshop on Learning Objects Technologies

TaTOAje 2007

24-28 September, Morelia, Mich. Mexico

<http://investigacion.udgvirtual.udg.mx/eventos/tatoaje/07>

Bioforum 2007

25-26 September, Milan, Italy

<http://www.bioforum.it/english/english.htm>

12th Latin-American Seminar on Technological

Management – ALTEC 2007

26-28 September, Buenos Aires, Argentina

[http://www.altec.secyt.gov.ar/seminario/seminario\\_altec.htm](http://www.altec.secyt.gov.ar/seminario/seminario_altec.htm)

1st International Conference on Methodologies,

Technologies and Tools enabling

e-Government (MeTTeG07)

27-28 September, Camerino, Italy

<http://conferences.cs.unicam.it/metteg07/>

## O C T O B E R

EGEE Conference 2007

1-5 October, Budapest, Hungary

<http://www.eu-egee.org/egee07/home.html>

9th European Conference for the Advancement of Assistive Technology in Europe

3-5 October, Donostia, San Sebastian, Spain

<http://www.fatronik.com/aaate2007/castellano/index.php>

Conference and call for papers on the role and dynamics of R+D corporate activities

8-9 October, Seville, Spain

<http://iri.jrc.es/concord-2007>

International Conference on Educational Technology and Innovations

8-12 October at Cintemex, Monterrey, Nuevo León, Mexico

<http://www.rediiien.org.mx/Inicio/tabid/36/Default.aspx>

15th Latin American Congress on Higher Education Computing (CIESC 2007)

9-12 October, San José de Costa Rica

<http://www.clei2007.org/index.php?id=26>

10th Information Security Conference

9-12 October, Valparaíso, Chile

<http://www.isc07.cl/presentation.php>

IFIP/ACAM Latin America Networking Conference 2007

10-11 October, San José de Costa Rica

<http://lanc2007.upv.es/>

Congress: "ICT at the service of education"

10-13 October, Cartagena de Indias, Colombia

<http://edutic.unitecnologica.edu.co>

2nd International Workshop on Secure Information Systems (SIS 07)

15-17 October, Wisla, Poland

<http://www.sis.imcsit.org>

CUDI Autumn Meeting 2007

18-19 October, Villahermosa, Tabasco, Mexico

[http://www.cudi.edu.mx/otono\\_2007/index.html](http://www.cudi.edu.mx/otono_2007/index.html)

e-Challenges Conference 2007

24-26 October, The Hague, Netherlands

<http://www.echallenges.org/e2007/default.asp>

IEEE Nuclear Science Symposium and Medical Imaging Conference

28 October-3 November, Honolulu, Hawaii, USA

<http://www.nss-mic.org/2007>