Year 2 - Nº 8, July 2006. Bi-monthly Bulletin

DeCLARA

Editorial

Ida Holz,
Executive Director of RAU, Uruguay
Secretary of CLARA's Board of Directors

June is a symbolic month

In June 2002, we were called for a meeting with the European Commission in beautiful Toledo, where we were offered cooperation to develop an Advanced Network installation project in Latin America with connection to GÉANT network.

In June 2003, 14 Latin American countries (at present, 18 are involved), signed the statutes of the newly born CLARA organisation (Latin American Cooperation of Advanced Networks). Some of CLARA's objectives were:
- Coordination among National Academic Networks in Latin America and with other regions.
- Cooperation for promoting scientific and technological development.
- Planning and implementation of network services for regional interconnection and,
- Development of a regional network (RedCLARA) that interconnects national academic and research networks and that will be operated by its Associates.

The first stage of RedCLARA installation was completed about a year later, in November 2004, when the main ring was closed, connecting thus Argentina, Brazil, Chile, Mexico and Venezuela. Connection to GÉANT was also obtained at that time (to date, there are 14 countries connected).

How come consensus and support were so promptly obtained?

It all began in 1991, at the first Latin American meeting of Academic Networks, held in Rio de Janeiro. Representatives from European countries, the USA, from international organisations like PNUD, OAS, UNESCO, and the Latin Union and from satellite connection equipment companies, among others, attended that meeting. Everybody wanted to sell something, or give advice on what to do and in what way, or advice on whom to contact and who could help us...

As Latin American representatives, we requested a whole morning on our own so as to have an internal discussion. During that morning we agreed, within a few hours, upon the creation of a Forum on Latin America and the Caribbean Networks.

We barely knew each other, but that morning we felt bonded by our Latin American identity and we knew we had to stay together and work together.

The Forum on Latin America and the Caribbean Networks ("enred") went ahead. One of the outstanding activities was the permanent technical and management cooperation among participants...reciprocal support.

As a result of the encouragement provided by this collaborative work, other network-related Latin American organisations were created: LACTLD (on organisation of cctld's in Latin America and the Caribbean), LACNIC (our region's NIC). Additionally, WALC (Workshop of Networks from Latin America and the Caribbean, held every year since 1997) was consolidated.

With such a thrust and the certainty of being on the right path, we persisted for a long time on our goal of having a Network installed throughout the region.

This was not possible at the beginning, most of the times because we lacked the technology, or because costs were too high. Thus, our communications were carried out through the USA.

Some countries like Argentina, Brazil, Chile and Venezuela gained access to Internet2, by taking advantage of Global Crossing's offer to provide free 45 Mb connectivity but when other countries in the region were left behind for not having the same possibility, our aspiration for a regional network was ever present nonetheless.

Research and education network development in Latin America has been uneven. Some bigger or richer countries understood from the beginning that it was necessary to have suitable tools to advance scientific and technological development, with collaborative projects involving many countries. On the other hand. Smaller or poorer countries have advanced comparatively less.

However, the RedCLARA Project made it possible to join for everybody, and it also encouraged the creation of national networks. Today, there are 14 countries with a national network and connection to RedCLARA. But this is just the beginning. Although our mission was physical connection, we believe it is necessary to generate a great dissemination movement to promote the countless possibilities that this connection entails... We dreamed about it for a long time and today we have it. Now we have to make use of it. Our researchers and teachers must know that they have a powerful tool for developing their projects, in collaboration with other countries in the region or in the developed world. We must generate databases with everybody's projects and curricula in order to make exchange easier... The ACLARA project will be an essential tool to make that happen...

Undoubtedly, there are many people whom we should thank for their support, like the European Commission, which made ALICE project possible and whose support we hope to receive again and especially our dear friends from DANTE.

But most importantly, we have learned how to walk together. This is a great attainment and, I believe we should be proud and motivated to keep up. There is a lot to be done and our joint participation is essential. We must fight within our countries, and abroad, to keep this project and make it grow.

At the XXXVI General Assembly

OAS Promotes Higher Education Institutions development in Americas

The importance of regional networks was stated in the Santo Domingo Declaration, where they were encouraged to keep up their work. According to the Declaration's conclusions, the idea is that these networks explore the opportunities offered by ICT in order to promote technologies' dissemination and transference, fulfilling the terms agreed upon by both parties and contributing to an integral development of the countries in the Hemisphere.

María Paz Mirosevic

The XXXVI OAS General Assembly was held in Santo Domingo, Dominican Republic between June 4th and 6th. At this forum, where 34 Ministers of Foreign Affairs from its member states took part, the debate was centred on "Governance and Development in the Knowledge Society" and the Santo Domingo Declaration was signed.

There were 35 conclusions, of which the 19th particularly addressed the issue of higher education institutions in the Americas. These institutions were invited to keep up contributing to the creation of human resources in the areas of governance and Knowledge Society development. Clearly, this conclusion concerns all Latin American national networks and, of course, RedCLARA, which has already gained a position and the recognition for its significant work in the region.

Furthermore, the Declaration highlighted the importance of developing collaborative regional networks, as well as the access to public goods and studies that explore the potential of ICT to promote technologies' dissemination and transference, fulfilling the terms agreed upon by both parties and contributing to an integral development in the Hemisphere.

All of this reminds us of the IV EU-LAC Ministerial Forum on the Information Society conclusions. At the Forum, held in April in Lisbon, Vivian Reding, the European Union Commissioner for the Information Society, highlighted RedCLARA as the main achievement of the collaboration between Europe and Latin America:

"We acknowledge the progress made in the interconnection among the Latin American (RedCLARA) and European (GEANT) networks, which provides a solid basis for scientific bi-regional cooperation, contributing to achieve the objectives adopted at the World Summit on the Information Society of Tunis. In this regard, we want to bring to the attention of the Heads of State and Government the importance of maintaining the political and financial support to initiatives that consolidate the ICT based scientific collaboration space, such as RedCLARA and its interconnection with GEANT, to guarantee its continued operation and bring an extension to the Caribbean region. We express our support to the strengthening of EU-LAC research & development cooperation, notably in the context of Seventh EU Framework Programme for research, which will cover the period 2007-2013, based on common priorities jointly identified and building on the potential extension of the interconnection between RedCLARA and GEANT".

Going back to the Santo Domingo Declaration, the OAS was requested to keep up coordinating regional efforts, through its Secretary General, particularly the Executive Secretary for Integral Development (and its specialised

commissions like CITEL and COMCYT), to develop initiatives and identify additional resources in order to offer greater ICT access, use and benefits. This contributes to bridging the digital divide and strengthens the labour force's capacities for the 21st Century.

Other emphasised aspects

The Declaration also highlighted the Knowledge Society's development as well as the universal and equal access to it. This represents a challenge and an opportunity that helps reach the Americas' social, economical and political goals.

The commitment made in the Florida Declaration in June 2005 was reiterated "delivering the benefits of democracy, to advance the prosperity, democratic values, democratic institutions, and security of our Hemisphere, considering that ICT can play a significant role in this regard". The private sector, the civil society, regional and international institutions and the financial bodies were encouraged to participate in the implementation of development strategies that promote "universal Internet access for all the peoples of the Americas". The commitment to promote literacy campaigns and investment on science, technology, maths and engineering were also restated.

It is worth mentioning the importance attributed in the Declaration to information access and knowledge exchange and creation, which are "important elements of a free, democratic and pluralist society". "The use of the Internet and the World Wide Web, without political censorship, can contribute to the development of the democratic future and the exercise of the right to freedom of expression and the free flow of information and ideas for all the peoples of the Americas". The Declaration also reiterated what the Plan of Action of the Mar del Plata Summit established in terms of incorporating new ICTs into the capacity-building of our citizens.

Finally, the Ministers made a request to the OAS Permanent Council to convene an inter-American specialised conference in order to exchange experiences that support member states in the design of legislative, regulatory, and administrative frameworks with respect to ICTs, enabling them thus to support advances in the expansion of the knowledge-based society and promote investment.

Celebrates first anniversary by installation of 45,000 km of network

GÉANT2 Network Delivers Advanced Global Research Collaboration

Cambridge, UK, 28 June 2006: Over 60 million researchers and students around the world are now benefiting from global collaboration through access to the GÉANT2 next generation research and education network. Celebrating its first anniversary, GÉANT2 is now 90 per cent deployed within Europe and has installed links to the US, Latin America and Asia to facilitate a true global research community.

The Works of DANTE

The world's most advanced research network, GÉANT2, maps a network footprint of more than 50,000km when completed that if laid out end-to-end, would circle the Earth.

By delivering a combination of high bandwidth, unrivalled geographic coverage and user-focused services GÉANT2 is pushing forward collaborative research in areas such as climate change, life sciences, grid computing, radio astronomy and sustainable development. Many of GÉANT2's links operate at 10 Gbps –speeds which equate to transferring over 1,000 digital photos in 1.6 seconds.

The first hybrid network deployed on an international scale, GÉANT2 utilises both packet and circuit switching. It was officially launched in June 2005 and is co-funded by the European Commission and 30 of Europe's National Research and Education Networks (NRENs). Co-ordinated by research networking organisation DANTE, the pan-European network now has connections to research networks in the US (Internet2 and ESnet), Asia-Pacific (TEIN2), China (ORIENT), Japan (SINET), Latin America (ALICE-RedCLARA) and North Africa/Middle East (EUMEDCONNECT).

"Global collaboration is critical to moving forward scientific research and development to benefit people everywhere," said Dai Davies, General Manager, DANTE. "The combination of the GÉANT2 network and its links around the world is bringing researchers together, allowing them to share ideas and make distance irrelevant. Much has been achieved in GÉANT2's first year – but as more and more projects benefit from the network we see even greater results ahead."

An example of the world-leading projects that GÉANT2 is supporting is DEISA (Distributed European Infrastructure for Supercomputing Applications). GÉANT2 provides the backbone to link DEISA's supercomputers across Europe, helping to deliver the high performance computing power needed to solve major scientific and industrial problems. Current DEISA projects include research into genomics (the building blocks of human existence), climate research into simulations of extreme weather events and research using computational fluid dynamics (CFD) to minimise automotive noise. DEISA involves 11 principal supercomputing sites across Europe, which with more

than 4000 processors delivers an aggregated computing power of more than 22 TeraFlops (22 trillion calculations per second).

Through GÉANT2 researchers can collaborate quickly and easily with their peers wherever they are located, as well as benefiting from services such as the ability to work remotely, accessing their research and university networks from any connected location. Unlike the commercial Internet which uses shared links, GÉANT2 utilises switched circuits that can provide point-to-point services, guaranteeing bandwidth for high capacity applications. Users gain the benefit of having a virtual private network (VPN) without the cost or complexity of building and managing one. DEISA is one of the first projects to benefit from a VPN, using a topology currently being designed by DANTE and GÉANT2 engineers.

Through its hybrid nature, the network provides standard IP connections alongside switched links on most routes. In addition, dark fibre has been lit on many routes using Alcatel transmission equipment. Rather than leasing lit circuits from telecoms providers, lighting leased dark fibre delivers greater control over performance and costs and has been implemented across 12,000 km of the GÉANT2 network.

About GÉANT2

GÉANT2 delivers the next generation research and education network for Europe. With over 30 million users in 34 countries across the continent, GÉANT2 offers unrivalled geographical coverage, high bandwidth, innovative hybrid networking technology and a range of user-focused services. Its extensive geographical reach interconnects with other world regions, enabling global research collaboration. GÉANT2's comprehensive programme of research and service development keeps Europe at the forefront of global research.

GÉANT2 is co-funded by the European Commission under the Sixth Research and Development Framework Programme. The project partners are 30 European National Research and Education Networks (NRENs), TERENA and DANTE. It is co-ordinated by DANTE, the research networking organisation that plans, manages and builds research networks all over the world. For more information visit: www.geant2.net

2nd Workshop results

The advance of the EELA squad

An island located in front of the town of Itacuruça (90 km south of Rio de Janeiro) as an idyllic natural setting. The participation of over 40 representatives from several institutions and countries involved in the project, 31 presentations and an openly collaborative spirit. These were the elements that turned the 2nd EELA Workshop, held on 24 & 25 July, into a big success.

María José López Pourailly

Any doubts about the favourable evolution of the "E-Infrastructure shared between Europe and Latin America" project, were cleared during the 2nd Workshop. Thanks to general coordination of Bernard Marechal, Deputy Project Coordinator, the event was held at the Pierre Hotel, located on a small island near the Brazilian town of Itacuruça.

EELA started out officially on 30 January 2006 in Madrid. The promise of developing a human network working on Grids, e-Infrastructure and e-Science in only two years, seemed ambitious, to say the least. However, that promise became a motto, and all the steps guiding participants towards EELA's accomplishment were agreed on at the so-called "Kick-off Meeting" (as in a very long football match that is looking forward to having extra time)

Thus, at the beginning of the year a multinational team set out to develop strategies for the attainment of precise goals. However, in the middle of the match's first half, the field –thousands of sq. km big, to be exact- seemed to be conspiring against the players: passes were vague, and the captain and the coach's instructions were not heard by the players. But despite the apparent chaos, things were going well and, actually the instructions and strategies were being carefully followed. This became evident at Itacuruça with the presentations of each Work Package, their leaders' words and the information provided by their members.

In short, Itacuruça served to appreciate the real value and know-how of the team and its work. Moreover, it served to realise that the human network promised at the "Kick-off Meeting" was already established. And this

does not include the advances presented in terms of Grid development, Certification, Applications and Dissemination, all of them available in the Workshop presentations, which can be downloaded from http://indico.eu-eela.org/conferenceTimeTable.py?confId=36

By the way, since we have mentioned the issue of Dissemination, it is necessary to point out that knowledge dissemination is a fundamental aspect of EELA. Within this context, the third EELA Tutorial, focused on Grid Administrators, was held on 26 & 27 June in Rio de Janeiro, right after the Workshop. The high attendance and the interest on the training contents tell the project's managers about the relevance of the next tutorials. These are:

- 4th Tutorial, Mexico - 28 August – 1 September 2006.
- 5th Tutorial (for Grid Users), Santiago de Chile – 6 & 7 September 2006.
- *Grid School, Brazil – November 2006.
- *Grid School, Venezuela – 30 July to 10 August 2007.

*Only the people who have taken part in one of the Tutorials will have access to Grid schools.

Is there anything else to add? Of course! The 1st EELA Conference, which will be held in Santiago de Chile, on 4 & 5 September. But this is the subject of another article on DeCLARA's present edition.

Further information on EELA at:
http://www.eu-eela.org

EELA is looking for all people interested in Grid and Grid applications

The EELA Project, in which CLARA is an active member, is collecting relevant information on Latin American communities interested in introducing distributed computing and Grid technologies for e-Science.

EELA has produced a questionnaire, and is inviting all CLARA's member institutions to answer it, with the intention of designing a map of potential users and communities in Latin America that could benefit from the use of the Project's infrastructure

EELA has established for Latin America and Europe a common infrastructure, interconnected by means of RedCLARA and GÉANT, in which it is implementing applications on Biomedicine, High Energies Physics, e-Education and Climate. Given its scope and its intention of offering new distributed computing and Grid applications, EELA will help bridge the digital divide in Latin America by providing researchers with a powerful e-Infrastructure, which will allow them to carry out complex research in a simpler way. The idea is to expand this in order to establish the basis for a great community of users.

Answer the questionnaire and invite members of your institution to do the same, at http://www.eu-eela.org/private/eela_new_communities_form.php

Chilean advanced network

REUNA wants to keep up its leadership

REUNA is Latin America's oldest network and, for the same reason, its evolution can be an example of hard work and experience for its peers. We talked to Paola Arellano, the corporation's Executive Director, who exposed her viewpoints on leadership, the digital divide and advanced networks projections in Chile and in the rest of the region.

CLARA and RedCLARA have been key element in advanced network development in Latin America. Paola Arellano tells us how Chile is taking advantage of this network through REUNA, and she also tells us about the projects developed thanks to CLARA, both in the country and in the corporation she manages.

María Paz Mirosevic

REUNA, Chile's National University Network, alongside its partner institutions made it possible for Chile to be the first Latin American country to join Advanced Academic Networks by means of its connection to the Internet2 network in 2000.

"This group of institutions has made a strategic bet for almost fourteen years by funding this technological infrastructure, understanding that any university's strategic development cannot do without the research done on this kind of networks", explains Paola Arellano, REUNA's Executive Director.

Being a leader among its peers has more to do with the REUNA's approach to its work: "being the engine and a part of academic network initiatives, by means of strategies like collaborating, sharing, establishing and relying on people and communication networks". This is the way the Executive Director explains REUNA's position in the region.

"We are the oldest Network; I mean the Network, not the people working in it. This means we have come a long way and therefore we have an experience which is undoubtedly a great asset", explains Arellano after being asked bout REUNA's advantages in relation to its peers.

When talking about other advantages Paola adds "having a Technical Area committed to the network's operation, and which also takes part in innovative infrastructure, services and applications projects. We also have the Projects and Communications Areas, which allow us to develop new initiatives, involve our stakeholders and keep them informed on what is happening in the area of Academic Networks".

However, there are some disadvantages and, as a result, REUNA does not get the expected funding. According to the Executive Director, the reason for this is that, in Chile, having an Academic Network as a technological platform that supports the national Science, Technology, Education and Innovation system is not viewed as strategic for the country's development, which is not the case in some neighbouring countries. Therefore, there is no funding from the government for capacity and coverage expansion. In Chile, there are still some important universities that are not part of REUNA, and this undermines their strengths. "A network is stronger inasmuch as it incorporates all relevant agents in its sphere", explains Arellano.

A bit of History

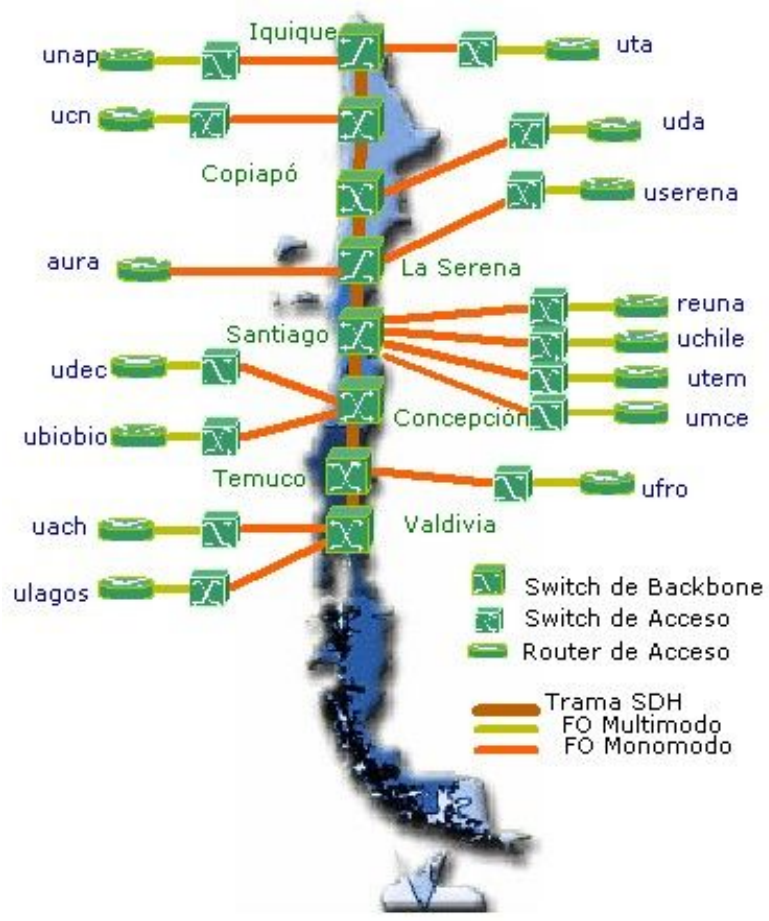
It was in 1986 that REUNA already set out on its journey. In the first five years, this institution functioned as a university interconnection cooperative, and then in 1991, as part of an agreement of the Council of Chilean University Rectors, it was formally constituted as a non-profit private Corporation.

At the beginning of 1992, REUNA got access to Internet, and thus to NSFNet, thanks to the National Science

Foundation from the USA. All of this stems from the support provided by CONICYT (National Council for Science and Technology – www.conicyt.cl), and other institutions like the Andes Foundation and the Organisation of American States, OAS. In September that year, REUNA introduced a national main line, so that its partners could access Internet through a 64 kbps connection with NSFNet. That project made it possible to establish a National Network with three operations centres: Antofagasta, Concepción y Santiago.

Until July 1997, REUNA was the number one Internet services provider (ISP) in Chile, with the biggest share in the market. In that month it sold the connectivity business to CTC Internet S.A., and established a strategic alliance with CTC (now Telefonica de Chile) to embark on new projects that demand high investments.

The importance of this alliance consisted in Telefonica Chile CTC supplying services for REUNA. This resulted in the creation of REUNA2, a 155 Mbps broadband network based on a Telefonica's SDH network, which links all Consortium institutions, from Arica to Osorno making use of ATM technology. In 2000, REUNA's member universities made it possible for Chile to become the first Latin American country to join Advanced Academic Networks by accessing Internet2 network.



Topology of REUNA

Until June 2001, REUNA provided commercial Internet access for its partners, acting as an ISP specialised in the University System. From then onwards, the Corporation has been focused on High Speed Networks and on Research and Development Projects.

Within such context, on 9 June 2003 the Latin American Cooperation of Advanced Networks CLARA was created and REUNA, along 12 Latin American networks became a part of this new cooperation. Undoubtedly, this has been a positive stimulus favouring collaboration actions that can be developed within the region.

RedCLARA in Chile and Region

For REUNA's Executive Director, CLARA has been crucial for the development of advanced networks in Latin America. According to her, the regional scenario is very different since CLARA came into being.

What's your opinion of CLARA's work in terms of connection to advanced networks in Latin American countries?

CLARA's work has been fundamental. Today, we are witnessing a radical change in the academic networks scenario in Latin America an its international connection. There are already 14 networks connected, while a few years ago the situation was quite different, with only 4 established networks connected to international academic networks. It is evident that this change has a favourable impact on collaboration actions that can be carried out within the region. Nowadays we can already interact by making use of those networks with many more institutions; work in joint regional projects and with other international counterparts.

In any case, it is necessary to bear in mind the fact that the "Physical Network" is not sufficient. We need a real commitment in order to work on projects and applications that increase the network's value and to encourage current initiatives to make use of it. This is a task that demands a joint effort of all partners to motivate their institutions to make use of this platform.

Chile, through REUNA, is one of the first countries that got connected to RedCLARA. What is REUNA currently doing to take advantage of RedCLARA? What activities are you developing at present?

One of the characteristics of REUNA that single it out from other academic networks, is that it regards support for collaborative projects development as one of its strategic objectives and guidelines. This is why we have been actively involved in projects originated within CLARA, not only through the Corporation's direct participation, but also by involving our member universities. We are certain that this is the best way of establishing collaboration networks that make use of advanced communications networks.

REUNA is taking part in the EELA and RINGRID projects, and supporting the Chilean counterpart of the eXpress project, all of them funded by the European Commission. Besides, we have tried to actively participate in the initiatives undertaken by CLARA members, on many occasions as actors, and also supporting their promotion. Communications networks are important, but they are useless if there are no concrete activities involved.

We are convinced that it is necessary to add value to the hard work that went into getting a regional network. Undoubtedly, this means a lot of work, which cannot be undertaken only by CLARA's executive staff, since it requires a real commitment of all its members and the opportunities are there.

In your opinion, what has been the influence of CLARA and of its network on REUNA's and Chile's technological activity?

As I have already said, CLARA changed the whole scenario in Latin America. As never before, today we are able to link, through CLARA, institutions that are distributed throughout the region. Some examples are the actions currently initiated together with the FAO, the ECLAC and the IBD. Additionally, our member universities are beginning to appreciate the benefits of this initiative, and today we have a significant flow of invitations to take part in Latin American and European projects, which clearly represents a great opportunity.

In your opinion, how do people in Chile view REUNA and CLARA?

Although we have made significant efforts to encourage collaboration among members, and between them and their international counterparts, there is still a lot to be done. There are some highly active groups, who grab the opportunities offered within the academic networks

scene, but it is still necessary to generate a critical mass that supports a network like ours, and I am not just talking about funding. This situation is similar to CLARA's and that of our partners in the region.

Of all the countries belonging to RedCLARA, Which one is a position of leadership in Latin America? Why?

Brazil has taken the lead, after all it is the 'pais mais grande do mundo' (the biggest country in the world) and it certainly has advantages, such as a significant amount of research and education institutions and well-established groups in various scientific areas. Another advantage is that the academic network is part of the actions of the country's Ministry of Science and Technology.

The digital divide on REUNA and its peers' agenda.

Paola Arellano states that one of the objectives of all Latin American advanced networks, particularly REUNA, is to bridge the digital gap in the entire region. But not only in relation to an average citizen's ICT use and access possibilities, but also regarding the opportunities available for the scientific and research community, as well as the competitiveness factors that are necessary to enhance industries. "The digital gap issue affects society in its entirety and, consequently, there are many actions that still have to be developed in order to attain our country's suitable incorporation. The positive factor is that in all areas of society there is a general agreement on the relevance of these topics for Chile's development. This is why governmental institutions and private entities alike have developed many initiatives", she adds.

What are REUNA and Latin America doing to bridge the digital divide?

At REUNA we are currently putting forward coordinated efforts to encourage a national e-Science programme. To do so, we will hold the 1st National Congress on e-Science on 6-7 September. This is the follow-up to the events we have previously organised in order to promote the dissemination of advanced academic networks. The objective of the Congress is to present world trends and developments of e-Science programmes, and their application in specific areas, and to begin discussing on the benefits, impact, need and feasibility of implementing a national e-Science programme as a support strategy for research, development and innovation in Chile. These actions cannot be postponed if we want to keep up our regional leadership in these subjects.

As for Latin America, I think it is certainly a region that needs to approach this issue with greater coordination and strength, because at the last EU-LAC Forum on the Information Society held in Portugal we could confirm the intention of all participating nations to support initiatives developed here. However, it is also true that there are other regions, like Africa, that have quickly reacted in these matters.

What actions are still necessary in Latin America in order to eliminate, or at least reduce, the digital divide?

Interacting through and with the technology that will be in use in the market within a few years makes it possible to develop knowledge creation and dissemination under conditions similar to those of developed countries. This way, we avoid the creation and expansion of a new digital divide within the areas of science, technology, innovation and education, which are crucial for each country's competitiveness. The truth is that thanks to the ALICE project, our national networks in the region, alongside CLARA, are taking important steps towards bridging the digital divide. In this sense, we are safely moving forward.

REUNA wants to keep up its leadership

According to Paola Arellano, REUNA is still a leading network within the region because, in general terms, Chile offers the conditions to lead, and keep up that leadership. REUNA will continue to encourage integration among national research groups, as well as their integration with International Excellence Networks and participation in research Projects with other regions, especially Europe, the USA and Latin America, by making use of Advanced Academic Networks.

The Executive Director of the Chilean National University Network hopefully stated that "there is some considerable work that needs to be done in order to keep up the leadership in this area. It is essential to form a strong alliance between the REUNA Corporation, the Government and related companies, making it possible, thus, to generate a stable framework for the National Advanced Network, where REUNA can be an integral component of the country's I+D (research and development) policy. This way, as a country, we can increase our scientific, technological, innovation and knowledge capacity".

This is REUNA's challenge: to keep up its leadership. Apparently, there is no room for failure. This consortium works on projects involving state-of-the-art technology, such as Grid initiatives that are currently operating the only remote instrumentation pilot in Latin America. They were the first to work on wireless and optical networks projects, and at present they are focusing their efforts on applications such as on-demand videos and videoconference, as well as on efforts to encourage the development of an e-Science programme in Chile.

4-7 September 2006

EELA and REUNA will turn Santiago into the capital of e-Science and Grid development

Four days, three events, high-value contents, collaboration, projects, research, development, innovation, academics, networks, e-Infrastructure, Grids, e-Science, EELA, CLARA, REUNA, Europe, Latin America, North America, Oceania. Can you recall all that? Now, with all these elements, do you know what the resultant product is? Knowledge, which will delivered by means of three firmly consistent events: the EELA Conference (4 & 5 September), the I National Congress on e-Science (6 & 7 September) and the 5th EELA Tutorial for Grid Users (6 & 7 September).

María José López Pourailly

e-Science? Some people may wonder when was it that we started spelling science with an 'e'. That is to say, there must be still some people left who have not discovered the possibilities that advanced networks offer for scientific development. Well, since we have raised the issue, let us briefly develop it: e-Science is the concept that defines those scientific activities developed my making use of geographically distributed resources, which are accessed through the Internet. However, resources such as massive computing and storage – those most frequently required in the field of e-Science – are not obtained through commercial Internet since they require high-speed networks focused on research – the so-called Advanced Academic Networks, or Research and Development Networks (that's it! Just like RedCLARA, we knew you knew it). These networks, together with the collaborative work applications developed in them, are creating an ideal scenario for interaction between researchers, scientists and academics.

Considering what we have just said, it becomes crystal clear that for e-Science development it is fundamental to have advanced communications networks. Since 1992, Chile has REUNA, the national education and research network, which currently interconnects 16 national institutions among each other and, through RedCLARA, with Europe and the rest of the Americas. Even though it is true that there are various technologies to share and access those distributed resources that make e-Science development possible, the Grid is the one that has been established as the common standard, and as the most favourable scenario, in terms of the performance conditions it offers. Latin America currently participates, through RedCLARA, in EELA ("E-Infrastructure shared between Europe and Latin America"). This is a project for the development of a Grid connecting 10 countries and 21 institutions from Latin America and Europe. With the 17 million Euro granted by the European Commission, EELA aims to build a bridge between consolidated e-Infrastructure initiatives in Europe and emerging ones in Latin America by creating a human collaboration network with shared use of a Grid infrastructure to support advanced applications development and testing.

An e-Science programme does not merely thrusts a nation's development, it makes that development possible. The introduction of a Grid linking Latin America and Europe by means of high-values scientific applications, just like EELA, is certainly a great advance in that sense.

Is it necessary to further explain the issue? Probably not. Those people who still know nothing about it may find out about it when it is already too late to board the train. The train? Well, we need to start out at some

point, and attending the 1st EELA Conference, the I National Congress on e-Science and the 5th EELA Tutorial for Grid Users, is an excellent way of doing so.

1st EELA Conference

Date: 4-5 September 2006

Venue: Federico Santa María Technical University, Santiago branch.

Topics: EELA Project, Grid projects and applications developed in Europe and Latin America (cases), the Future of the ALICE project and RedCLARA. Further information:

http://indico.eu-eela.org/conferenceDisplay.py?confId=32

http://www.eu-eela.org

I National Congress on e-Science

Date: 6-7 September 2006

Venue: NH Santiago Hotel

Topics: National e-Science Programmes in Europe, North America and Oceania (cases), e-Science applications in areas such as Bioinformatics, Astronomy, Business and Mining.

Confirmed Speakers:

· Bill St Arnaud: Graduate from Carleton University's School of Engineering and Senior Director for Network Projects at Canarie Inc., an organisation devoted to Internet development in Canada.

· Louis O. (Bob) Hertzberger: MA (1969) and PhD (1975) in Experimental Physics form Amsterdam University. He is currently working as Scientific Director at the Netherlands Bioinformatics Centre (NBIC) and Director of Virtual Lab for e-Science, based on Grid technology.

· Rajkumar Buyya: MA in Computer Science and Software Engineering from Bangalore University (India 1995) and PhD in Computer Science and Software Engineering from Monash University (Melbourne, Australia – 2002). Professor Buyya is the Director of the MA of Engineering in Distributed Computing (MEDC) and Director of the Grid Computing and Distributed Systems Laboratory (GRIDS) at the Department of Computer Science and Software Engineering in Melbourne University, Australia.

· Roberto Barbera: Cum Laude Graduate in Physics (1986), Roberto Barbera obtained his PhD in Physics at University of Catania in 1990. Since early 2005 he works as associate professor at University of Catania's Department of Physics and Astronomy. EELA Project's Technical Coordinator.

· Tony Hey: BA in Physics and PhD in Theoretical Physics from Oxford University. Professor Hey is currently Microsoft's Corporate Vice President for Technical Computing, where he coordinates efforts to collaborate with the global scientific community

5th EELA Tutorial for Grid Users

Date: 6-7 September 2006

Venue: REUNA's Training Room

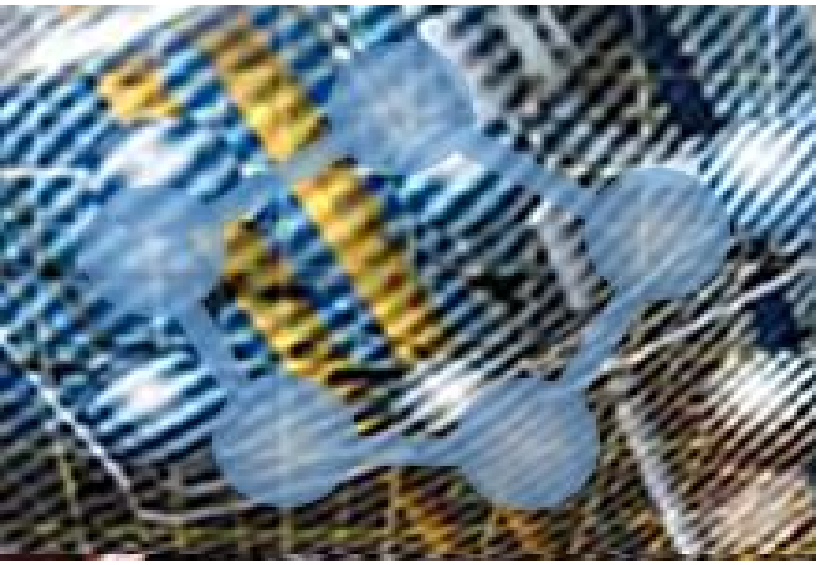
Spaces: 40 people.

Further information: http://indico.eu-eela.org/conferenceDisplay.py?confId=52

Single registration form for all these events available at:

http://formularioeela.reuna.cl/formulario.php?page=AddPersona_en&accion=add

Everything ready for the Latin American Conference on Learning Objects



LACLO 2006 will be held in Guayaquil, Ecuador between 23 and 27 October 2006 and it promises to be a reflection of the development of learning objectives technologies in Latin America.

The event is organised by CLARA, the Ecuadorian Consortium for the development of Advanced Internet (CEDIA), the Litoral Higher Polytechnic School (ESPOL) and the European Knowledge Repository (ARIADNE).

The first Latin American Conference on Learning Objects is a major event. Its organisers, Professor Enrique Pelàez from ESPOL, Ecuador and Professor Eric Duval from Kuleuven, Belgium, promise an opportunity for all regional educators, administrators and researchers to share information, tools and experiences in the development and use of learning objects technologies.

LACLO will try to be a reflection of these technologies development in Latin America, as well as an opportunity to observe the state of the art of learning objects in other countries in the region.

What are your expectations from LACLO 2006?

The Latin American Conference on Learning Objects has a clear goal: to reach an initial agreement for the interconnection, at different levels, among the various learning objects collections in the region in order to create an allied network of intercontinental repositories that enhances their benefits in each of our institutions.

The institutions involved in the organisation of LACLO 2006 – Latin American Cooperation of Advanced Networks (CLARA) http://www.redclara.net, the Ecuadorian Consortium for the development of Advanced Internet (CEDIA) http://www.cedia.ec, the Litoral Higher Polytechnic School (ESPOL) http://www.espol.edu.ec, and the European Knowledge Repository (ARIADNE) http://www.ariadne-eu.org expect this interconnection agreement to materialise. This is why they are inviting all interested people to take part in this workshop, either by sharing their experiences or research through the presentation of a scientific article, or by participating in the various presentations and discussions to be held during the week.

The scientific articles presented will be previously revised by regional and international peers, who will assess their relevance, originality and coherence. Those articles that are accepted will be published, both in print and digitally, in the conference memories. More elaborate versions of the best-evaluated articles will be considered for publication in the International Journal of E-learning.

This conference makes use of the Open Conference System, which allows participants to send their articles through the web, at: http://www.learningobjects2006.espol.edu.ec/submit.php?cf=1.

The deadline for sending articles is 1 August 2006, and authors will be notified on 25 August. For further information, visit the event's website, or contact ESPOL director, Enrique Peláez (epelaez@espol.edu.ec).

Topics

Relevant topics for this conference are (not exclusively):

Pedagogical Issues:

- Introduction of Learning Objects in Instructional Design
- The impact of Learning Objects on the Teaching/Learning Process
- A critical view of Learning Objects

Technical Issues:

- Tools for the Creation, (De-)Aggregation, Indexing, Comparison and Use and Re-use of Learning Objects.
- Usability of Tools for Manipulating Learning Objects
- Scalability of System Architectures of Learning Objects Management.
- Interoperability of Learning Objects Tools
- Interoperability between Learning Objects Systems and other Systems
- Current Research and Challenges of Learning Objects Technology

Administrative issues:

- Intellectual Property and Copyright
- Sustainability of Initiatives involving Learning Objects
- Models of incentives for the creation of Learning Objects
- Business Models

Other topics that the author regards as relevant for discussion on Learning Objects in the region can also be included.

"Join the challenge"

First Science, Technology and Innovation Week in Colombia

For the first time, Colombia will offer its citizens the opportunity to take part in a week devoted to Science, Technology and Innovation. The idea is to make an inclusive event, where all people, regardless of age, have the chance of participating in fun and pedagogical programmes, so that they can better understand these practices. RENATA will play an active role in the activities.

María Paz Mirosevic

The Colombian Institute for Science and Technology Development "Francisco José de Caldas" – COLCIENCIAS – will celebrate the first Science, Technology and Innovation Week, where the National Academic Network of Advanced Technology, RENATA, will actively participate in the activities.

The objective of this Week is to encourage the entire population's participation, mobilisation and awareness in relation to scientific and technological issues. The national meeting will take place throughout Colombia between 8 and 14 November 2006, thus placing itself within the context of the International Science Week, which will be celebrated in 26 countries in Europe, Africa, Oceania and America.

The scientific, academic and entrepreneurial community is also invited to 'join the challenge', which is the slogan that COLCIENCIAS has chosen for the event in order to promote sciences and to strength democratic access to and use of scientific and technological knowledge. In fact, there will be several concentration points available, so as to attain higher levels of participation among Colombians. Consequently, projects, conferences and demonstrations will take over public spaces, research centres, university laboratories, astronomic observatories, industrial complexes, botanical gardens, schools and shopping malls, among others.

The event, designed to foster new knowledge and cooperation links between Colombia and other world institutions, has developed a website that makes it possible to find out about other countries' experiences. This site will also serve as a means of interconnecting all regions, exposing projects of various scientific communities and networks, as well as presenting the multiple initiatives that constitute the I Science, Technology and Innovation Week. This website will provide full information on the First Science, Technology and Innovation Week. http://www.semanaciencia.info

National Science, Technology and Innovation Week throughout the world.
http://www.frappr.com/?a=widgetlandingg&gid=626981&src=flash_map

RENATA

This is the new-generation Colombian network that connects local universities and research centres among each other, and, thanks to CLARA and through RedCLARA, with the world's high-speed international networks and most advanced research centres. RENATA is part of the CLARA community since 24 January 2006.

COLCIENCIAS Colombia

COLCIENCIAS Colombia is a national public organism, with administrative autonomy and independent resources, and subscribed to the National Planning Department. Its fundamental task is planning, articulating and supporting scientific and technological development in order to contribute to Colombia's social, economic and cultural development.

In Brazil

RNP makes a positive balance after its 7th Workshop and confirms its annual event's excellence

The 7th RNP Workshop took place between 29-30 May 2006, at the Embratel Station Convention Centre in Curitiba. Representatives from advanced networks in Europe, GÉANT (Dante), the USA, Internet2, Latin America, CLARA and the Brazilian RNP participated in the event. The work groups belonging to the local network presented the advances and achievements of their research. As if this was not enough, RNP's objective of providing the scientific community with the best

RNP
Rede Nacional de Ensino e Pesquisa
Promovendo o uso inovador de redes avançadas no Brasil

Between 29-30 May, the city of Curitiba hosted ICT specialists, governmental entities, telecommunications companies, network research groups and academic communities. All of them gathered to take part in the Seventh National Education and Research Network Workshop (WRNP).

Three intense days: in each of them, the Embratel Station Convention Centre's main hall was filled with an audience attentive to the speakers' presentations. The first of these was on "NRENs's Measurement Infrastructure" and it presented the initiatives developed by international academic networks. RNP's Measurement 2 Work group, and representatives from GÉANT, Internet2, RedCLARA, as well as the host RNP, also took part in this panel. Some of the actions carried out in measurement infrastructure mentioned in the panel were diagnosis cost-reduction and the increase of network communications.

Apart from highlighting the new Ipê Network, the present year's meeting discussed the progress of RNP work groups, international academic networks integration initiatives and distributed applications.

Seven years of history

Undoubtedly, this is a long-standing event that, year after year, deals with relevant topics reflecting the state of high-speed advanced networks in Brazil and the rest of the world.

RNP Workshops have been held for years, and each new version has something special about it. The only exception is 2002, when the Workshop was not held. In 1999 (http://www.rnp.br/wrnp2/1999), the first Workshop was organised with the idea of encouraging communities in academic and private sectors, as well as discussing the goals of the RNP2 Backbone implementation.

In 2000 (http://www.rnp.br/wrnp2/2000), the Brazilian Minister of Science and Technology launched the high-speed RNP2 Backbone's first phase. In 2001 (http://www.rnp.br/wrnp2/2001), we came to know about the main projects in the areas of Internet2 applications in Brazil: networks, middleware and high-speed networks applications being developed at that time.

The Fourth RNP2 Workshop 2003's main topic (http://www.rnp.br/wrnp2/2003) was "building a bridge between the Giga Project and the Research Community". The main objective was to gather researchers and developers of network technologies and advanced applications that are beneficial for RNP work groups, especially the Giga Project, which is an optical networks pioneering initiative in Brazil. The following year, the 5th RNP2 Workshop's programme (http://www.rnp.br/wrnp2/2004) included debates on experimental optical networks, research and education networks and advanced network applications (telemedicine, peoprocessing, genome project) as well as technical and DIVULGACION presentations from research groups supported by RNP.

In 2005, the 6th RNP Workshop (http://www.rnp.br/wrnp2/2005/) focused on fostering the debate on optical initiatives and advanced

applications for academic networks. The Workshop allowed the RNP-supported groups to present the outcomes of their research.

As for the present year, the 7th RNP Workshop concentrated on RNP's multigigabit network, on Ipê Network, on network innovation projects, and on specific communities such as Redecomep (Education and Research Community Network) and Telemedicine University Network (RUTE). Other topics that were discussed include the progress made by RNP work groups and international integration initiatives for academic networks and distributed applications.

An event full of novelties

The Connection Networks group presented its results at the Wireless Networks panel. Célio Vinícius, from the Fluminense Federal University's Telecommunications Engineering department, presented a project for constructing a wireless backbone for broadband transmission in areas without network infrastructure, or where communications are very expensive.

According to Mauricio Gaudencio, wireless technology is an excellent low-cost solution for municipalities, considering the fact that laptop production represents a 53% of the computer market. At the same panel, Joao Couto Godinho from Embratel presented access technology using an operator, especially for wireless solutions.

The Remote Visualisation work group (GT) stood out by showing live the manipulation of geographically distributed electronic devises. A Pioneer 3 robot, showcased at the event, was operated by a work group in Natal (RN). The same thing happened the other way round: WRNP delegates were able to operate a similar robot located in Natal. This way, they proved that it is absolutely possible for users to remotely manipulate technological applications. A clear example is the development of Subaquatic Inspection technology. This FURG, UFRN and IFPR project, which plans the construction of robots to be used for making visual aquatic maps and navigation sensors, helping thus to solve common underwater problems. Robots would reduce costs and avoid misuse of human resources.

The Network Storage group, showed it was possible to introduce a temporary data distribution and storage infrastructure, with interfaces for users (via browser) and for applications (via API). These interfaces would be integrated to RNP's main line, making use of a high-performance storage technology available in the USA (Internet2) and Europe (GÉANT).

The Digital TV WG discussed the outcome of their research and the introduction process of this technology in Brazil. The group is working on the development of a platform that facilitates users' access to RNP networks and to its TV channels distributed through the Internet.

The Videos Management WG presented a prototype for a digital video distribution system elaborated by them. The group is working on the development of a generic multimedia services platform based on an RNP network services infrastructure.

The joint RNP-CPqD Giga Project was a high point of the meeting. The project is on the implementation of an experimental network devoted to developing optical network technologies, telecommunications applications and services associated with IP and broadband technology.

New Law on Informatics mentioned during the opening ceremony

The event's official opening ceremony included presentations by Sylvio Petrus, Informatics Policy Secretary from the Brazilian Ministry of Science and Technology (MCT); Michael Stanton, RNP's Innovation Manager, and Nelson Simoes, RNP's General Manager.

After the Stanton's opening words, Nelson Simoes ratified RNP's objective of providing the scientific community with the experimentation infrastructure. "Applications being currently developed, will certainly be available for networks in the next five years", Simoes remarked. According to Petrus, RNP's importance lies on higher education's familiarisation and expansion by means of distributed and distance education technologies.

Amendments to the Law on Informatics planned by MCT were quoted as a way of renovating encouragement for Science and Technology development and, consequently, Brazil's socio-economic developments as well. The increasing awareness of this sector's importance, promotes the set of new regulatory frameworks for the Science and Technology area in Brazil.

A G E N D A

A U G U S T

Workshop on Web Services-based Grid Applications (WSGA)
14 August, Ohio, Columbia – USA
http://pat.jpl.nasa.gov/public/WSGA/

19th World Computer Congress
20 - 25 August, Santiago de Chile
http://www.wcc-2006.org/

S E P T E M B E R

22nd World Conference on Distance Education
3 – 6 September, Rio de Janeiro – Brazil
http://www.icde22.org.br/espanol/index.htm

I EELA Conference
4 – 5 September, Santiago, Chile
http://www.eu-eela. org

I National Congress on e-Science
6 – 7 September, Santiago de Chile
http://e-ciencia.reuna.cl

5th EELA Tutorial for Grid Users
6 – 7 September, Santiago de Chile
http://www.eu-eela.org

3rd International Researchers Meeting: Knowledge, Innovation and Human Development
5 – 6 September, Bogotá – Colombia
http://zulia.colciencias.gov.co/portalcol/index.jsp

Grid Platform Conference 2006
6 – 8 September, San Francisco – USA
http://www.platform.com/gridconference

20th International Conference on Informatics for Environmental Protection
6 – 8 September, Graz – Austria
http://enviroinfo.know-center.tugraz.at/

12th International Workshop on Groupware CRIWG 2006
16 – 21 September, Valladolid – Spain
http://www.criwg.org

2nd International Workshop on Supporting Knowledge Collaboration in Software Development
19 September, Tokyo – Japan
http://l3d.cs.colorado.edu/kcsd2006/

6th International Symposium of Information Technology Applied to Mining, INFOMINA 2006
19 – 22 September, Lima – Peru
http://www.infomina.com.pe/

7th International Conference on Grid Computing IEEE/ACM
28 – 29 September, Barcelona – Spain
http://www.grid2006.org/index.htm

34th Research Conference on Communication, Information and Internet Policy
29 September – 1 October, Arlington, Virginia - USA
http://www.tprc.org

O C T O B E R

3rd International Workshop on Networks for Grid Applications GridNet 2006
1 – 2 October, San Jose, California – USA
http://www.broadnets.org/2006/

Gelato ICE Conference
1 – 4 October, Singapore
http://www.ice.gelato.org/pdf/gelatoICE_attendee.pdf

4th North American Ornithological Conference
3 – 7 October, Veracruz – Mexico
http://www.naoc2006.org/es/default.htm

5th Annual Global Colloquium on Engineering Education
9 – 12 October, Rio de Janeiro – Brazil
http://asee.org/about/events/conferences/international/2006/index.cf

ICTP Workshop
9 – 20 October, Trieste – Italy
http://www.naoc2006.org/es/default.htm

E-Learn World Conference 2006
13 – 17 October, Honolulu, Hawaii
http://www.aace.org/conf/elearn/call.htm

CUDI gets ready for its Autumn Meeting 2006
19 – 20 October, San Luis Potosí – Mexico
http://www.cudi.edu.mx/otono_2006/index.html

1st Latin American Conference on Learning Objects LACLO 2006
23 – 27 October, Guayaquil – Ecuador
http://www.learningobjects2006.espol.edu.ec/index.php?cf=1

8th International Symposium on Computers in Education (SIIE06)
24 – 26 October, School of Industrial and Computer Engineering, Vegazana Campus, León – Spain
http://siie06.unileon.es/welcome.php

eChallenges e-2006 Conference
25 – 27 October, Barcelona – Spain
http://www.echallenges.org/e2006/

International Conference on Information Technology in Biomedicine (ITAB 2006)
26 – 28 October, Ioannnina (Epirus region) – Greece
http://medlab.cs.uoi.gr/itab2006/