

DECLARA

Editorial
Paola Arellano

**The Salvadorian Research, Science and Education Advanced Network
RAICES at the height of Science and Research
Awakening**

EELA Blazed in its First Conference

**6-7 September
Chile held its First National Congress on e-Science**

**RedCLARA NEG-TREK
Captain Porto and his crew did it again...**

**CLARA-TEC Special Article:
Get to know about the actions
RedCLARA generates through the voice
of the Work Groups Coordinators
VC-WG / VoIP - WG / CSIRT-WG /
MCast-WG / IPv6-WG / AdRou-WG
/ Measurements WG / Training WG**

**7th IEEE International Symposium on Cluster
Computing and the Grid**

**According to European Commission:
Seventh Framework Programme Increase
Europe's Growth and Competitiveness**

**Call for competition:
MERCOSUR Prize for Science and Technology**

Agenda

Editorial



**Paola Arellano,
REUNA Executive Director**

**The role of Academic Networks
in the development of National
e-Science Programmes**

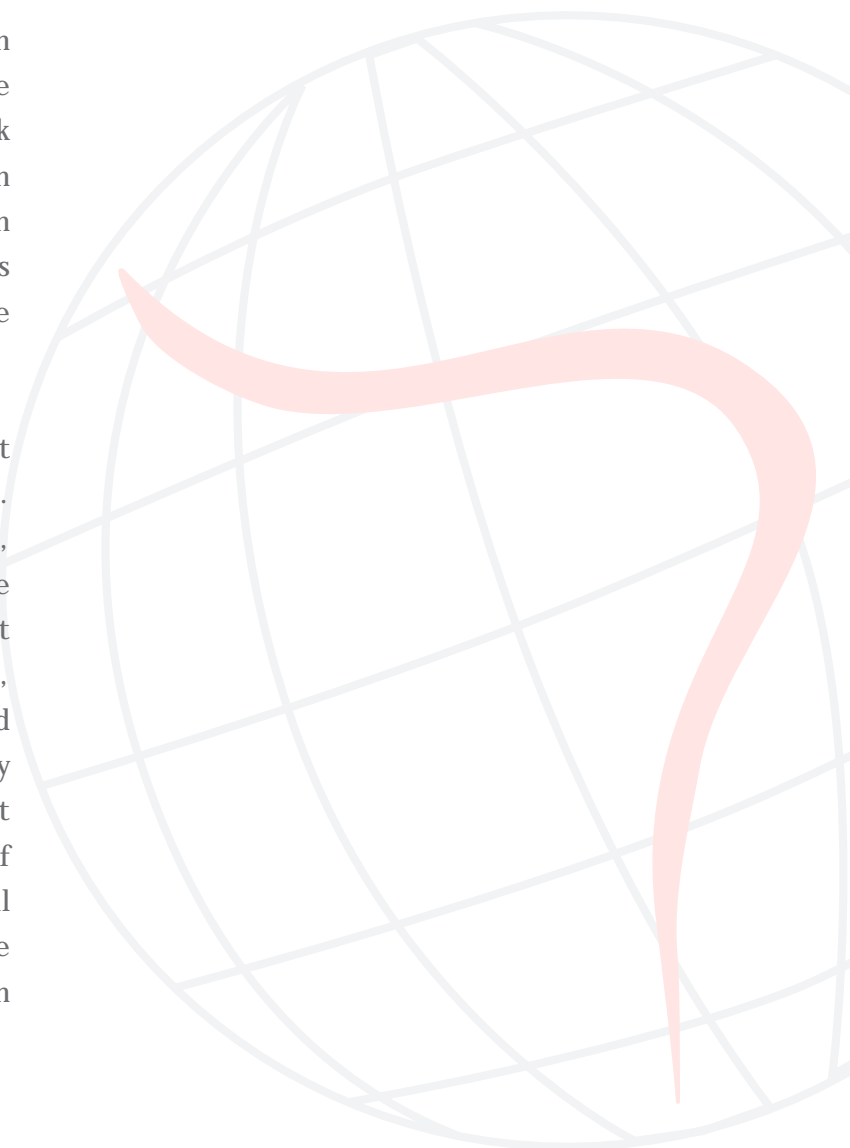
After the recent Congress on e-Science organised in Chile by REUNA, we can say that there are multiple definitions of e-Science, and even multiple names for the same concept. However, in general terms, e-Science is the expression that defines the development of global collaboration in various scientific areas, carried out by making use of geographically distributed resources which are accessed through Advanced Academic Networks or Research and Development Networks.

e-Science development involves the coordinated action of several actors within the area of science, government and industry. In addition, it requires base infrastructures, which some people call Cyber-infrastructure or e-Infrastructures. Tony Hey, former Director of the UK e-Science Programme, mentions in his presentation at the recent Congress that “in Europe, the USA and Asia, there is a common view regarding the cyber-infrastructure which is necessary to support e-Science revolution”, middleware and high-capacity academic networks are some examples. A similar view is shared by Bill St Arnaud from Canarie Inc. and Bob Herteznberger from the Netherlands Virtual Laboratory for e-Science, who state that e-Science requires an optimal technological infrastructure.

The efforts developed in Latin America, materialised in the great development of Academic Networks in the region and the construction of the Regional network (RedCLARA), are creating an ideal scenario for interaction among researchers in research centres, as well as in universities and enterprises, thus laying the foundations for the establishment of e-Science programmes in the region.

Academic Networks have to play an active role so that this development becomes a reality in our countries. We must, together with our partner institutions, coordinate the actions in this direction, in the understanding that e-Science will have a positive impact on the advance of knowledge, the industry and, therefore, of society. This is so because e-Science facilitates and encourages collaboration among geographically distributed research groups by means of the efficient use of centres and/or resources and the emergence of new modalities for sharing knowledge. Both facts will result in a new thrust to technology, which will enable the opening of new markets and new forms of interaction and collaboration.

If European, North American and Asian countries, among other ‘rich and famous’, are working hard in order to foster global collaboration and develop e-Science programmes, then ‘developing countries’ like ours, with limited resources and a small amount of researchers, must not step aside since delaying this development will only increase the digital divide we are working hard to bridge. We already have the networks; we have provided clear evidence of our disposition to collaborate among us and with our international counterparts, therefore... let us begin to articulate the actions to encourage e-Science development in Latin America.



The Salvadorian Research, Science and Education Advanced Network RAICES at the height of Science and Research Awakening

RAICES Executive Director, Rafael “Lito” Ibarra, tells us how he views RAICES within the advanced networks scenario, and how RedCLARA has influenced science and technology development in the region.

After analyzing the digital divide issue, Lito proposes the creation of a project at national, and therefore regional, level prevailing over the isolated projects in order to bridge the digital divide in a more radical way.

María Paz Mirosevic

On 29 January 2004 the Research, Science and Education Advanced Network was established in El Salvador. It was acknowledged as this first network of its kind, mainly because research and science and technology related issues have not been particularly fostered in that country.

This is a history is repeated throughout the region: usually society is not very aware of the importance of having advanced networks in favour of development and the economy. The road is a difficult one, but not necessarily impossible, according to RAICES executive director, Rafael “Lito” Ibarra, who says he is certain that they are at the height of science and research awakening and that the Latin American dream of establishing our own regional network “with a Latin flavour” is an opportunity they are taking advantage of and which makes the future look promising.

RAICES Projects

RAICES was born out of the direct stimulus of the CLARA and ALICE projects and, although this happened long ago, Ibarra points up the importance of keeping on with its internal consolidation process. At present, the main task of this network is to find the way of taking advantage of the collaboration and communication tools within the context of research projects and work, as well as to find the way of attracting researchers, scientists and academics from all disciplines to start doing collaborative work.

This kind of work is precisely what Rafael Ibarra is trying to incorporate in RAICES: “El Salvador, as well as other countries in the region, are awakening and becoming aware of the importance of carrying out collaborative scientific research work, but the tools necessary to develop this collaboration have not been fully developed yet, specially regarding advanced networks” he says. However, Ibarra is optimistic at seeing how the initiatives developed by several countries make one think that the region is making progress. The challenge for the less developed groups is to learn from the most advanced ones, who in turn have to orient their peers in their road to a full development.



Rafael “Lito” Ibarra.

Ibarra highlights some of the initiatives that are being developed in El Salvador. One of them is RAICES participation in the Presidential Commission for the Information Society, which was constituted last January. This Commission is related to the Puebla Panama Plan (PPP), which

contemplates the optical fibre infrastructure that will link the PPP eight member countries and that could eventually have RedCLARA as one of its users, specifically in the national networks of these eight countries.

Another initiative has to do with an institutional restructuring for science, technology, quality and innovation systems in El Salvador. Lito comments that this could lead to new openings in terms of research, academic networks and regional collaborative work issues, although he is not entirely certain as to when these results could be observed: “Traditionally, there has been a very limited culture of research and local technological development and therefore, as opposed to other countries, the take-off may take a bit longer”.

Rafael, how important do you think CLARA is in the development of Latin American networks? CLARA can perfectly become a forum and a meeting point where the most advanced countries and networks share some of the clues towards fostering development and research in collaboration with the less developed networks and countries.

This objective can be fulfilled through the example, through joint projects, links and relationships, through openness towards the scientific world and through regional efforts and various types of exchange, most of them coordinated or at least facilitated by CLARA.

Additionally, the political role and the leading international participation that CLARA has attained are beneficial for the member regional networks and make it possible for the smaller, or younger, networks to be known abroad.

What is RAICES doing at present to take advantage of RedCLARA? What activities are you working on?

Currently, the technical groups from RAICES member institutions have had to consolidate and increase their knowledge in order to offer a better service to the communities they cater for. In this sense, we have carried out tests, meetings and training activities between RAICES members and some of CLARA's members by making use of the Network infrastructure. However, activities properly related to research, teaching and exchange among peers have been relatively few and have been carried out thanks to the particular initiative of some of RAICES member institutions.

Apart from RAICES technical group, we have established another group of people devoted to research and/or teaching among the Salvadorian network members with the intention of facilitating the exchange of ideas and experiences in order to make a better use of RedCLARA.

The Latin American Scenario

In Rafael's opinion Latin America is moving forward, but not enough. According to him, when comparing each country's figures in terms of infrastructure, events, projects, organisations and telecommunications service, there are plenty of good news in relation to the bridging of the digital divide; Latin American countries are effectively getting closer to the possibilities available in the countries on the other end of the divide. “However, there is still a lot to be done and the timing and the way in which science and technology are developing in the rest of the world do not help us. It's as though we took three steps forward and the horizon moved six steps backwards at the same time and, what is worse, the acceleration of that estrangement is also on the increase” he explains.

Lito proposes that the key to solve the problem is to achieve a real project at national and, therefore, at regional level.



RAICES
Red Avanzada de Investigación,
Ciencia y Educación Salvadoreña

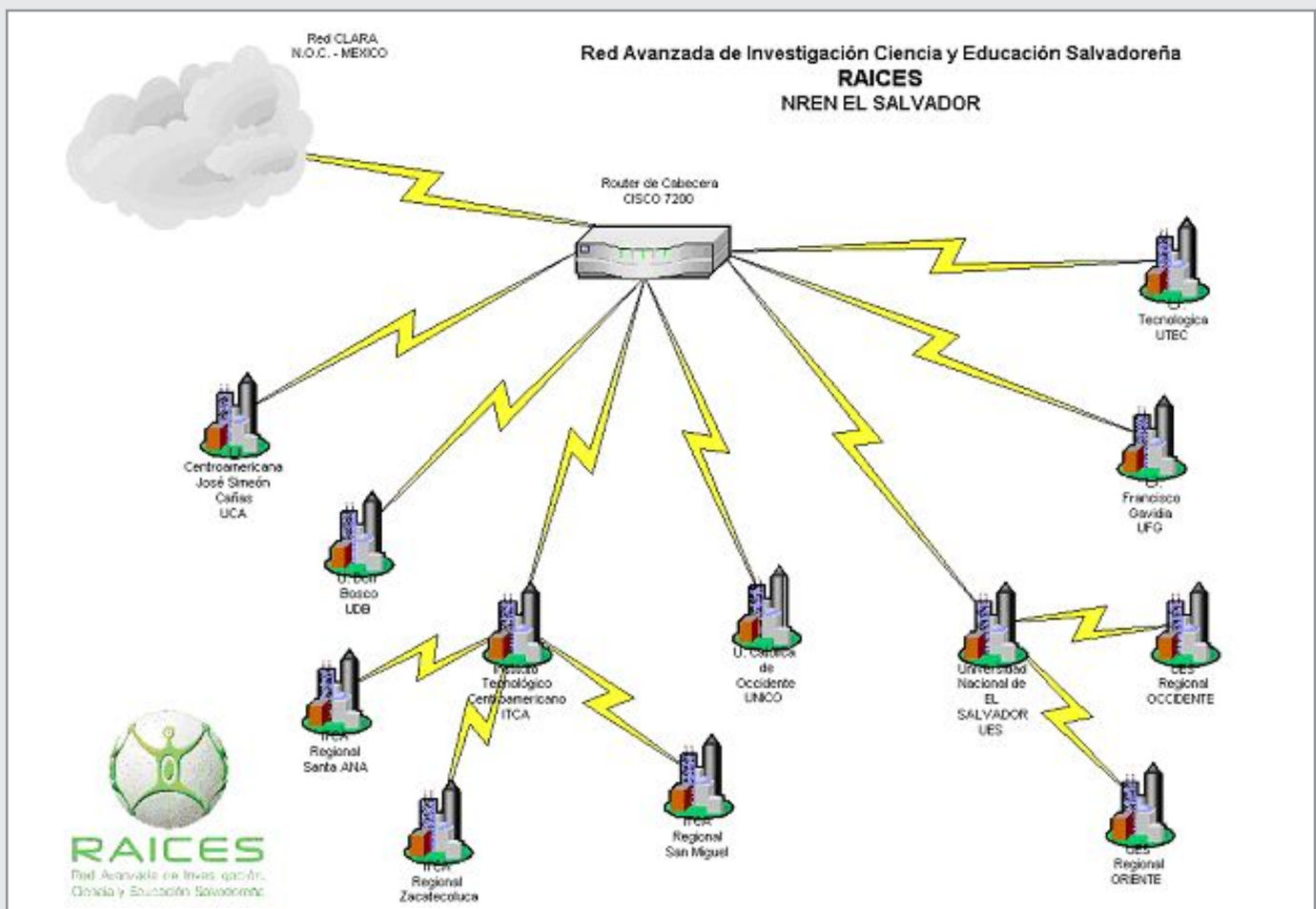
It is not enough to plan and develop isolated projects, whether conducted by the government, private companies, educational institutions or NGOs. All of this is necessary and represents a contribution towards making progress. However, Lito proposes to “agree upon and define the route as a nation”. “Some countries that did the exercise can now see the outcomes of that national commitment and bet. It could be a national plan or a joint multi-sector agenda, but it is important to develop strategies that survive the political and economic swings”. From Rafael’s point of view, this is the road we should establish as a region. We have come a long way thanks to the initiative of organisations we are highly indebted to: “Latin America in general and our region’s advanced networks in particular will always be indebted to and grateful of the European Community initiative and the action of entities such as GÉANT and DANTE for having been one of the most relevant catalysts for making come

true the long-time Latin American dream of establishing our own regional network, with a Latin flavour”.

Lito’s gratefulness does not end here. From his point of view, we cannot forget about the influence and support of some Latin American national networks which, with a broad outlook, have given their support especially in the Indo-American region. Among them, he mentions CUDI, RNP and RedCLARA itself: “The other national networks, colleague members of CLARA, are still a key referent for the development of other networks which, like RAICES, are at the dawn of collaborative research and scientific work” he states.

RAICES Website: <http://www.raices.org.sv/>

RAICES Topology



EELA Blazed in its First Conference



Held in Santiago of Chile on September 4th and 5th, in the Técnico Federico Santa María University, the First EELA Conference was developed around the project EELA (E-Infrastructure shared between Europe and Latin America) collaboration with other Grid projects, its activities status, Grid communities and applications and the RedCLARA status. With more than 25 presentations, a fruitful dialogue about the future of RedCLARA and the participation of about a hundred attendees, the First EELA

Conference not only was a success, it also showed the evident collaborative potential and liaisons that exist between Latin America and Europe.

María José López Pourailly

In words of Bernard Marechal, EELA Deputy Project Coordinator, the 1st EELA Conference “has clearly proved that one of the main objectives of EELA was to disseminate Grid culture and consequently foster the development of e-Science, opening very wide time slots to several sister projects. The presence of an European Commission representative was of key achievement”. The representative that Marechal refers is Josephine Arpaillange, Attaché of the Cooperation Section at the European Commission Delegation in Chile, who highlighted the importance that the EELA project has in terms of advancement and collaboration between the old continent and Latin America.

This first Conference was developed around four main sessions:

- Collaboration with other Grid Projects: this was the space devoted to the EGEE-II, BELIEF, SEEGRID-2, BALTICGRID, EUCHINAGRID, EUMEDGRID, INTERACTIVE GRID, GRIDCC and EELA projects. Here the attendees received all the most relevant information about these projects, its scope of action, the applications that are implementing and the collaboration established between them.
- Status of EELA activities: this session was referred to three activity work packages of EELA, each one of them addresses different aspects of a Grid e-

Infrastructure. Their status and results was showed and very well received by the attendees.

- Grid Communities and Applications: large Grid e-Infrastructures make sense and can have long term future only if communities of people from different disciplines are interested in using them to run their applications. During this session the emerging communities and interesting applications that are been carried out in Latin America, had their space.

- Status of RedCLARA and perspectives for the future: the attendees were introduced to the status of RedCLARA and the current situation of the Latin American NRENs, through the presentation given by Eriko Porto, RedCLARA Network Engineer. After this presentation a very good dialogue took place in the Conference room, as Grid infrastructures unavoidably rely on the underlying high speed networks, and in Latin America RedCLARA is THE network, the last session of the 1st EELA Conference was structured as a forum in which the main issue was the RedCLARA long term sustainability after the end of the ALICE Project. Florencio Utreras, Executive Director of CLARA and Michael Stanton, RNP - CLARA delegate in EELA, were the main voices here.

“The first EELA Conference has been a great success for two reasons: its agenda was technically and politically correct and the local organization was very good”, says Bernard Marechal, pointing that the Conference “served to strengthen interactions between EELA partners and enable fruitful contacts with the Chilean e-Science community”.

After the 1st Conference, the EELA community was informed that the 2nd EELA Conference will be held in Rio de Janeiro, Brazil, in May of 2007. In the opinion of Marechal, “this Conference should focused on applications relevant to Latin American countries from a sociological/human point of view (e-Health, e-Education, e-Government, e-Society, etc.), attract as much as possible Latin American (Brazilian) decision makers and finally, open doors to industry”.

All the Presentations that were given in the 1st EELA Conference are available for downloading at:

[http://indico.eu-eela.org/conferenceOtherViews.py?view=standard&confId=32.](http://indico.eu-eela.org/conferenceOtherViews.py?view=standard&confId=32)



EELA Conference participants.

6 - 7 September:

Chile held its First National Congress on e-Science

“e-Science for the Bicentenary Chile: Experiences, Processes and Policies”, was the slogan of the event organized by REUNA –National University Network- and sponsored by the most outstanding institutions within the areas of science, innovation, and education in Chile, which was held on 6-7 September at the Santiago NH Hotel.

At the closing Forum-Debate called “An e-Science programme for Chile?” the Technical Computing Initiative Director, Fabrizio Gagliardi, renowned the world over as the father of Grid and e-Science infrastructures initiatives, highlighted REUNA’s capacities and its strong integration and positioning within CLARA and the EELA Project. He stated that “Chile has all the conditions to become an e-Science leader” thus pointing up the country as the one which has the best conditions to become the reference point in terms of Grids and e-Infrastructure in Latin America.



María José López Pourailly

Understanding e-Science as the set of scientific activities developed by making use of geographically distributed resources, which are accessed through Communications Networks, the National University Network REUNA organized and carried out the First National Congress on e-Science. The presence of outstanding researchers in the field and the high-level contents that were delivered, together with constant debate –a general trend at the end of each presentation- and the attendance of relevant representatives from the local and international academic and scientific sphere, turned this event into a highly relevant scenario not only for discussing e-Science trends and world development, but also for creating and establishing strategies to support scientific, academic and innovation research development in Chile and the region.

Two days were devoted to introducing the local community to the experiences of other countries which, through consistent R+D+I (Research, Development and Innovation) policies, have established national e-Science programmes, identifying thus the applied models and the role of science, technology, academia and enterprise agents as well as highlighting the impact that these initiatives have proved to have on various areas of knowledge. Two days were enough to arrive at a single conclusion at the end of the Congress: Chile can and must establish a national e-Science programme. To begin with, REUNA committed itself to elaborating a book which gathers together the experience

gained on 6-7 September in order to make it available for the speakers, attendants, and national decision-making agents in the field on R+D+I, as well as national research and education networks from CLARA’s member countries.

The I National Congress on e-Science was jointly held with the Chilean Science Academy and supported by Conicyt’s Science and Technology Bicentenary Programme.

In addition, the event was sponsored by the Ministry of Education, the MECESUP Programme, the Chilean Computing Science Society, the Chilean Association of Information Technologies Companies (ACTI), the Millennium Initiative, the Corporation for the Production Promotion (CORFO), the Telecommunications Department (SUBTEL), the Council of Chilean University Rectors (CRUCH) and the Association of Internet Providers (API). The event was also supported by the Estrategia Newspaper, CISCO Systems, ADEXUS, Microsoft and Telefónica Enterprises CTC Chile.

Speakers and Presentations

A key element for the Congress’ success was its programme, which was devoted to discovering the e-Science policies and experiences of leading countries in this field through the presentations of outstanding international researchers. Each of the speakers’ presentations and profiles are available for download at http://e-ciencia.reuna.cl/02_02.htm

(Spanish version) and at http://e-ciencia.reuna.cl/en_02_02.htm (English version). But get to know about the topics that were discussed before logging onto the Web in search of these files:

Bill St. Arnaud
Senior Director Advanced Networks for CANARIE Inc., an Canadian Internet development organization.
Presentation: Impact of e-Science on Canadian Industry, Education and Research.

Christopher Smith
Astronomer from the National Optical Astronomy Observatory NOAO, Cerro Tololo Inter-American Observatory CTIO.
Presentation:
Specific application: e-Science in Astronomy: From Photons to Petabytes, Astronomy in the Large-scale Research and Virtual Observatories Era.

Louis O. (Bob) Hertzberger
Scientific Director of the Netherlands Bioinformatics Centre (NBIC), and director of the National Virtual Laboratory for e-Science, based on Grid technology.
Presentations:
e-Science and Grid: Virtual Laboratory for e-Science in the Netherlands.
Specific Applications: From Bioinformatics to e-Science.

Rajkumar Buyya
Director of the Master of Engineering in Distributed Computing (MEDC) and Director of the Grid Computing and Distributed Systems (GRIDS) Laboratory of the University of Melbourne, Australia.
Presentation:
Gridbus Middleware: Building Utility Grids for Powering e-Science Applications.

Roberto Barbera:
Associate Professor at the Department of Physics and Astronomy of the University of Catania and Technical Coordinator of the EELA Project.
Presentation:
Grid as platform for e-Science: the EELA experience in e-Infrastructure.

Robert Michael Woodcock
Projects Manager of CSIRO (Australia's Commonwealth Scientific and Industrial Research Organisation) Exploration and Mining Division, Computational Geoscience.
Presentation:
Building and using Grid for Environment and Solid Earth.

Tony Hey:
Corporate Vice President for Technical Computing of Microsoft, where he coordinates efforts to collaborate with the global scientific community.
Presentation:
The United Kingdom e-Science Programme.

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



Participants of the I National Congress on e-Science during the closing ceremony.

RedCLARA NEG-TREK

Captain Porto and his crew did it again...

They did it again, yes! Serious Captain Eriko Porto and his crew manage to establish a new powerful link, the WHREN/LILA one. Now RedCLARA has a new traffic exchange point (TEP) with the United States of North America, and as we have read from Porto's diary, this means more than a lot for the CLARA community. Unfortunately, dear readers, while we were spying on Captains Porto diary, he discover us... you don't want to know what happened after that, all that we can say is that we don't know if we are going to be able to pass you more of the secret pages of his diary in the future... but we will try, of course we will.

NEG mission: following the route drawn up by the crew of the ALICE Project -the mother airship-, to explore new worlds, to seek out the unique and perfect way to establish the CLARA ring backbone and the connection of the Latin-American NRENs to it and to Europe - to boldly go where no other Latin-Americans has gone before, and to take CLARA members there.

The following quotes were taken from captains Eriko Porto diary before he discovered us spying on its pages.

María José López Pourailly

Wednesday 09, August, 2006

We have just finished the implementation of the WHREN-LILA link between Sao Paulo and Miami. We now have BGP peering session with the WHREN-LILA Traffic Exchanging Point, and also a multihop-ebgp session with Abilene through this TEP, we are now able to reach the USA researchers through the East and West coast, offering redundancy and a choice of low delay paths to these networks.

For the moment we are using an interim multihop-ebgp solution to peer with Abilene, but we expect very soon to establish a more direct layer-2 connection using new infrastructure being implemented in both sides.

I've been sending messages to the CLARA partners, to remind them that RedCLARA has IPv4 multicast services, and IPv6 unicast and multicast services available right away for the LA-NRENs. It is of most importance that they notice that in order to have the services implemented, they only need to send a straightforward request to the NOC (noc@redclara.net).

In the NEG we are also prepare to serve those LA-NRENs that don't have their own IPv6 blocks; now they can deploy the service using a range of RedCLARA's IPv6 block reserved

for this circumstances, needing only to send a request for the NEG (neg@redclara.net) that will coordinate with the IPv6 workgroup.

All the fronts are covered. The NEG can continue its mission.



While we were spying on Captains Porto diary, he discover us... you don't want to know what happened after that.

CLARA-TEC Special Article:

Get to know about the actions RedCLARA generates through the voice of the Work Groups Coordinators

The interviews with the work groups (WG) coordinators reflect the groups' overall successful performance and at the same time give an outline of the obstacles they are facing as well as their goals and future projections.

Most CLARA WG leaders insist on the lack of participation, which on their opinion could be disadvantageous for National Networks. The call and invitation to participate in favour of Latin American advanced networks is presented below.

For the present CLARA-TEC special edition we have compiled the operation state of each Work Group, their members, objectives, goals and current activities. By means of a "standard" interview with each WG coordinator, carried out invariably through the internet, we were able to compare the levels of development and motivations of all groups and to display the state of various applications and new technologies being developed in the National Research and Education Networks (NREN) that are part of the Latin American Cooperation of Advanced Networks.

Why do we do this? Let us answer with another question: Does it make any sense to have a network like RedCLARA and not make use of it to develop new applications and uses?

The work groups (WG) constituted to work in RedCLARA are headed by engineers from CLARA member NRENs. They coordinate the functioning of these groups in the following eight areas:

- Videoconference - Coordinator: Daniel Díaz, RAAP - Peru.
- Voice over IP - Coordinator: Iván Morales - RAGIE - Guatemala.
- Security - Coordinator: Juan Carlos Guel - CUDI - Mexico.
- Multicast - Coordinator: Guillermo Cicileo - RETINA - Argentina.
- IPv6 - Coordinator: Ásala Fernández - CUDI - Mexico.
- Advanced Routing - Coordinator: Eriko Porto - CLARA/RNP - Brazil.
- Measurements - Coordinator: Hans Reyes - CUDI - Mexico.
- Training - Coordinator: Iara Machado - RNP - Brazil.



CLARA-TEC members (part of the crew that travels alongside our well-known Captain). From left to right: Juan Carlos Guel, Guillermo Cicileo, Azael Fernández, Iara Machado, Eriko Porto y Hans Reyes (warrant officer in charge of RedCLARA's NOC).

Videoconference WG (VC-WG): A commitment-oriented group

Daniel Díaz, from the Peruvian Academic Network (RAAP), is the Videoconference WG coordinator. According to him, the group's objectives have to do, in the first place, with promoting a massive use of Videoconference applications in RedCLARA, currently in the height of the development process through the people responsible of NRENs. Their objectives also have to do with getting to know about the Videoconference-related human and technical (equipment) resources that each national network has available in various technologies: freeware, proprietary software and professional equipment. Another objective is to identify the most suitable Videoconference technologies for each NREN so as carry out a rapid and economic implementation in each case. This group also intends to coordinate large-scale events between RedCLARA's NRENs and other world academic networks, like the European counterpart GÉANT.

The VC-WG members are many and, according to Díaz, difficult to quantify. Most of CLARA's NRENs give their support. In fact there are many people within the same NREN who are part of the group, as in the case of CEDIA (Ecuador), RENATA (Colombia) and RAAP (Peru). "It would be appropriate to make public the support this group receives from the professionals of INICITEL, member institution of the Peruvian Academic Network-RAAP" states Díaz. Regarding the profile of the VC-WG members, the Coordinator states that they are professionals with vast knowledge of networks, advanced protocols and Videoconference-related topics, mainly platforms and protocols.

Daniel: What has the functioning of the work group been like, in terms of participation?

At first, we got response from only some of the networks, but nowadays practically all of them are committed to encouraging Videoconference use and, therefore, the level of participation is currently very high. Since the end of August we have been performing connectivity tests among CLARA's national networks and between these networks and Spain in order to have the basic infrastructure to participate in events such as @LIS Day. To sum up, I would say that today the functioning of the group is good.

What have been the specific achievements of the Videoconference WG?

I think it is fair to highlight the fact that with the support of all the NRENs we are implementing a Videoconference platform in each CLARA network. This platform, called ISABEL, was developed by the Polytechnic University of Madrid (UPM), Spain. In this case, it is important to point up the constant support given to RedCLARA by this university in the implementation of this platform.

On 17 May this year we held a large-scale virtual event, through RedCLARA, by making use of the ISABEL platform, which allowed us to interconnect CLARA's national networks with networks from Canada, Spain, Italy and Belgium. Last July, two sessions of the doctorate in Telematics offered by UPM were broadcast to the RAAP network and we expect to repeat the experience to be broadcast to RedCLARA.

Currently, we are coordinating a second large-scale event for @LIS Day, which will take place on 28 September with the participation of Europe and Latin America.

We are also working on our participation in various events carried out in Europe, such as the Workshop on Next Generation Internet, in October this year in Spain.

What are the group's goals until the end of the ALICE project?

To establish a Videoconference network by making use of freeware, propriety software and commercial equipment. The ultimate goal is to use this Videoconference network to encourage the participation of each NREN in academic events in Latin America, Europe and other countries that have access to advanced networks.

We also intend to know about all the resources that RedCLARA members have for a better use of the Videoconference network; to carry out technical, management and administration coordination through this VC network. Finally, we wish to establish a real-time link medium between all Latin American researchers and their counterparts in Europe, Asia, the USA and Canada in order to coordinate and execute research and technological development projects.

According to Daniel, the short-term projection of the VC-WG is to have a Videoconference network that offers the means for RedCLARA researchers to have the technological mechanisms to maintain their communications with other researchers so as to propose new research projects and thus turn the network into a sustainable one.

This WG expects to "work very closely with other work groups, such as the Training WG. From a technological point of view it is necessary to have, in the future, reflectors, MCU and public video rooms that allow a better use of videoconference applications" says Díaz.

Coordinator comments:

RedCLARA's Videoconference group plays a very important role in thrusting this academic network, since through this network and with the participation of the other CLARA work groups we will be able to start a training process in areas such as new telecommunication technologies, IPv6 applications development, security aspects in IP networks and advanced routing, among others. This is why all of us are committed to having, as soon as possible, a Videoconference network that can be available at any time for researchers and network developers in this part of the world.

I would like to publicly express my recognition to the entire staff of each of the academic networks that make up CLARA for their enthusiasm and support towards having not only one Videoconference platform but many, all of them linking researchers in real-time and promoting thus the use of RedCLARA. I would also like to express my recognition to the Polytechnic University of Madrid for the constant support and advice on these matters.

Voice over IP WG (VoIP - WG): With projections in mind

Iván Morales, from the Guatemalan Advanced Network for Research and Education -RAGIE-, is the VoIP WG Coordinator. The WG has three well-defined objectives: to find an efficient and scalable solution for the implementation of a telecommunications infrastructure that allows researchers and communicators to communicate with a service similar to traditional telephony; to favour the implementation of an Open Source platform in order to avoid engaging CLARA member institutions to a specific equipment provider; and to find a solution that is economic enough so that any institution can implement it without any budget problems.

This group is made up of 26 members from 13 different countries, including engineers and researchers from several institutions connected to RedCLARA who have carried out VoIP-related activities or who have an interest on the subject. Regarding participation “we have managed to have a certain degree of mail communication and we have already carried out three audio conferences where we have discussed the group’s activities, but participation is certainly a problem since out of the 26 members only 5 actively collaborate and the rest have acted mainly as spectators” explains Iván.

Iván: Tell us about the achievements you have had so far. Among the achievements attained we can name: the coordinated performance of several VoIP software tests through the collaboration of several members; the establishment of a work plan with specific areas to be covered; the definition of a name for the project - “Clara Tel” - and the definition of a general sketch of the devices to be used.

What are the group’s goals until the end of the ALICE project?

Bearing in mind the project’s uncertain future, our three basic goals are:

- To finish the complete definition of the final solution.
- To perform at least one pilot test of the final solution.
- Generate the necessary documentation for its implementation.

According to Iván, this group is very clear about its projections: they intend to lay the foundations so that, even when the

ALICE project has finished, there is enough motivation and interest to justify more work, even if funded by the institutions’ own means.

Coordinator comments:

The main problem for CLARA work groups lies in the lack of participation and commitment of its members. Due to the low level of participation, many activities are handed over to the groups’ coordination which makes it difficult for the groups to advance in their work, especially if we take into account the fact that as wage-earning employees we already have several previous priorities. I think that if we want a more accelerated progress and concrete results, CLARA and its members will have to consider having support staff and/or staff devoted to network tasks; another alternative could be to have a formal written commitment from the institutions the work group members belong to stating that these representatives can employ a given amount of time on network activities. Anyway, although we have advanced considerably in terms of the network’s general objectives, there is still a lot of work to be done.

The experience and the perspectives for our countries in this CLARA project are certainly wonderful, but once we have seen the advantages of being connected and communicated we must not step backwards, not even to breathe. It is reasonable to feel somehow frustrated because of the lack of certainty as to the continuation of financial support, but there will not be a real development without commitment and hard work. The objective will be, thus, to keep going as long as possible, until we are regarded as lunatics or suicidal. But, if we have worked with real care, then all the roads we have opened and trod upon will not have to be trod upon again and the links established will not be broken.

Security WG (CSIRT-WG): An invitation for the benefit of everybody



Juan Carlos Guel, from the University Corporation for Internet Development in Mexico -CUDI- and Head of the Computer Security Department UNAM-CERT, is the coordinator of the CSIRT-WG, whose fundamental mission is to “promote computer security culture in Latin America and the Caribbean”.

Guel tells us that the group has eight well-defined objectives:

- To establish a work framework, in terms of security, for each NREN.
- To promote the development of new work groups on security in Latin America and the region through training programs aimed at Security WG members.
- To establish discussion forums to exchange ideas, knowledge and experiences within the field of computer security, attention to incidents, etc.
- To promote the exchange of data and information on related problems, incident management, etc.
- To promote coordinated and prompt reactions for security incidents occurring on our infrastructure and that of each NREN.
- To create documents of best practices focused on academic environments.
- To build a data base of contact points responsible for security in each NREN.
- To cooperate with similar initiatives, such as:
 - TF-CSIRT Europe
 - APCERT Asia-Pacific

According to the coordinator, there are more than eight elements participating within the security group, and what is required is the interactive participation of each group member in order to counteract one of the main problems

faced by each academic network. Despite the importance of security in NRENs, today only a few networks have appointed their representatives to participate in the group’s activities and objectives.

The importance of having professionals is rather urgent for the Security WG and this is why adding new members is one of its main challenges. “The main demands of each NREN coordinator have to do with the scarce staff available and the lack of training on the subject. Therefore, we have proposed a training plan in different regions, where we can get a better insight into the specific demands of the CLARA community members and ,thus, together help the establishment of security work groups for all NRENs”, states Juan Carlos Guel, who also adds that “What we wish is that each NREN can appoint a person responsible for security who has an enthusiastic profile and who is a computing leader, so that he/she can lead initiatives in each country; a person with great skills for initiatives and events coordination and vast knowledge on computing and analysis skills in the face of various every-day Internet situations”.

Juan Carlos: What have been the achievements of the Security WG?

We have worked in two strands:

1. Security and Critical Infrastructure of RedCLARA. In this area we are today carrying out the first audit of the critical mission systems that make up RedCLARA. The basic idea is, from a base scenario, to detect the state of the network in the face of events that may alter or put under risk our NREN’s most valuable assets so as to gradually start enhancing the perimeter security of the elements that make up that critical infrastructure.

We estimate that this audit’s analysis and report will be ready by the end of October 2006.

2. Creation of Security Work Groups in the NRENs. We have proposed a training plan organised into regions in order to establish the initial framework of each security workgroup in the NRENs. By splitting this training into regions we intend to train the members of each national network and to pass onto them the key elements for the establishment of a CSIRT and then outline the communication mechanisms among members.

During 2005-2006 we conducted a security survey in order to identify the specific problems in each NREN. This survey was answered by only seven NRENs, where we were able to detect their needs and define the work group's objectives.

It is important to point out that today we are working on a portal with XML and RSS technology, where we will keep news, bulletins and alerts for the work group's members. This portal will have discussion forums on specific problems, where members will be able to exchange experiences and opinions, as well as having the contact points, etc. The portal will be presented in October 2006 and will be launched during the first regional training to be offered.

What are the group's goals until the end of the ALICE project?

- To establish a reliable and flawless critical mission infrastructure of RedCLARA's main elements.
- To provide support and advice on the creation of security groups in each NREN belonging to CLARA.
- To establish a community interested in the area of computer security (discussion forums, incident management, wiki, etc.).
- Incident management and information related to computer security among CLARA's NRENs.
- To establish academic agreements to generate academic resources specialised in Computer security among CLARA members.
- To foster the establishment of academic security standards in the organisations that make up RedCLARA.
- To promote academic and collaboration exchange among RedCLARA's members.

What are the group's projections once the ALICE project is completed?

The idea is: to have members and participants identified in each NREN in the Security Group; to have at least one member in each NREN trained to lay the foundations to establish the work we do with CLARA; to have an academic community with strong knowledge on security matters and able to independently define a work plan and to get members to interact, regardless of nationality and fostering the academic principles among themselves; carry out research projects among the Work Group; to keep in contact and that the Work Group keeps on working under the objectives established since its formation.

Coordinator comments:

It is important that each representative from each NREN is able to identify a person responsible for security problems so that together we can help each other counteract the threats we face daily in academic environments.

We are not free from problems such as network breakdown, viruses or worms. If we really want to establish a strategic planning of our network for each NREN, then we must plan this network bearing security issues in mind. This will enable us to avoid future problems, unnecessary costs and headaches caused most of the times by security problems that can be easily solved if planning has been done strategically in order to counteract current threats (viruses, worms, adware, malware, service denial attacks, etc.). Additionally, we will be able to establish the basis to counteract new threats that our network could face.

I invite you to join efforts so that together we can learn and form a proper academic community in computer security matters.



Multicast WG (MCast-WG): A call for Training



When describing the Mcast-WG, its coordinator Guillermo Cicileo from the Argentinean Academic Teleinformatic Network -RETINA- argues that “the Mcast-WG was established to provide support for CLARA’s NRENs in Multicast implementation by giving recommendations, generating documents and analysing problems that may come up”.

The general objective of this WG is to support the

deployment of Multicast in CLARA’s member NRENs. For this purpose we have established the following objectives: to become a forum for the exchange of experiences and knowledge; to provide support to those NRENs that want to implement Multicast; to provide support to CLARA’s NOC and NEG; to coordinate initiatives emerging from CLARA’s NRENs; and to identify and promote Multicast content sources within CLARA.

People from different countries participate in this group. Only a few of them know the Multicast subject in detail, while most members expect to implement it in their NRENs and get the WG’s support. In general, they are network administrators from CLARA’s NRENs.

According to Guillermo, the level of participation in the group is low, mainly because there is little experience on the subject within the NRENs. Only the oldest NRENs have staff trained to analyse configurations and to diagnose problems. “The lack of specific training on the subject does not make it possible for new actors to contribute to the work group”, comments Cicileo.

Guillermo: Tell us about the achievements of the Multicast WG.

Our main achievement has been the generation of documentation:

- A document promoting Multicast utility for the general non-technical public (done in conjunction with María José López, RedCLARA’s Communications Manager).

- Surveys in the NRENs about the degree of implementation and presentation of various summaries on the results.
- Basic recipe for Multicast configuration, generated from exchanges within the group.
- Web page: publication of part of this documentation.
- Another achievement has been the support given to NRENs:
 - Specific problem analysis on networks that had difficulties in implementing the protocol. The analysis was carried out together with RedCLARA’s NOC.
 - IPv4 and IPv6 Multicast tests with some of the networks connected to RedCLARA and solution to configuration problems.

What are the group’s goals until the end of the ALICE project?

Our main goal is that this tool can be available in all the NRENs connected to the network. To do so, we will specifically work on each NREN in order to move forward in disseminating this technology.

In addition, the group expects to finish generating the documentation established in its formation. We also expect to advance in experimenting with new features of this technology and continue giving support to those projects that make use of it.

The Multicast WG operates within the RedCLARA framework; therefore we expect to continue doing so once the ALICE project is completed. Most of the group’s members are related to Latin American NRENs and consequently the group hopes that there is continuity of the work developed so far. This is why Cicileo puts an emphasis on training technicians from the NRENs involved, even though we expect to enhance the available technical capacity thanks to the work done in collaboration with similar groups in other networks.

Coordinator comments:

We insist on the need for a higher level of participation, and therefore it would be important that all NRENs appoint people to make up the WG. This invitation is extended not only to the Operations Centres of those networks, but also to researchers interested in Multicast issues, since they will be able to contribute to the generation of critical mass to work in various tasks that the WG will have to face.

IPv6 WG (IPv6-WG): A subject that is becoming popular



The coordinator of the IPv6 WG is Azael Fernández, from the University Corporation for Internet Development in Mexico -CUDI-, who explains that the group has been formed “with the intention of serving as a point of reference and consultation on any IPv6-related issues and, at the same time, as a link with other similar work groups existing in related national chapters”.

Since its formation, this group’s objectives have been: to prepare RedCLARA to run applications that benefit from the new IPv6 features; to help the deployment and initial operation of IP v6 in the NREN’s networks in order to get NOC support; to research and make use of applications with IPv6 support in RedCLARA; and to enhance collaboration with other IPv6 work groups from advanced networks in other parts of the world.

Today, the IPv6 WG has 27 members, most of them engineers from the NRENs and people who have been involved in the subject for some time, promoting its use and providing sound knowledge. “As in the case of other work groups, participation was low at the beginning, but each of the group’s achievements is the result of the intense and constructive participation generated later” tells Azael.

Azael, what are the achievements you have mentioned? As a result of the work done by many people, the group’s participants and the NOC and NEG staff, we can point out to some important dates, such as 9 August 2005, when the Native IPv6 was implemented in the Backbone and 19 November 2005, when the IPv6 Multicast was enabled in the Backbone.

In addition, we received 13 surveys from NRENs with experience in the use of IPv6. These surveys were helpful and served as a referent in the implementation of IPv6 in RedCLARA’s Backbone.

After internal discussions and comments, we were able to establish the basis for routing policies and policies of IPv6

blocks allocation for the NRENs that do not apply to LACNIC to request their own block when they can request a provisional block for a year directly from CLARA.

We have established IPv6 connections (peering) with eleven out of the eighteen members of CLARA. In 2005 we established connection with those NRENs that supported IPv6 before the creation of RedCLARA, namely: RETINA (Argentina), RNP (Brazil), REUNA (Chile), CUDI (Mexico) and RAU (Uruguay). Then, in 2006 we have established connections with: RENIA (Nicaragua), REACCIUN (Venezuela), CEDIA (Ecuador), RAGIE (Guatemala) and RedCyT (Panama). The only NREN with pending IPv6 connection configuration is RAAP (Peru).

As a result, we have managed to further raise awareness and interest in IPv6 within the CLARA community.

What are the group’s goals until the end of the ALICE project?

To be able to get native IPv6 connectivity, not only through tunnel, for all of CLARA’s member NRENs, and to attain the best IPv6 Multicast adoption strategy; to continue issuing recommendations, best practices and generating documents that support IPv6 deployment in advanced networks in Latin America and the Caribbean. We expect to be able to: install monitoring tools on IPv6 traffic in order to differentiate it; and to formalise projects on development of applications with IPv6 support and services such as VoIPv6 or SIP, Videoconference, Multicast, etc.

Coordinator comments:

It would be interesting to carry out virtual days via videoconference on the work groups’ topics and on the use of applications that are already running on RedCLARA. Furthermore, I think the relationship between all work groups in the technical commission and the applications groups is very important in order to increase the use of RedCLARA itself and of national advanced networks, with applications that make use of the implemented technologies, such as IPv6, which is a tool to attain innovation and to provide a better service.

Finally, I would like to extend a cordial invitation to all people in the Latin American academic community who are interested in taking part in the IPv6 Work Group, as well as in the other work groups, since collaborative work among the different projects is highly necessary.

Advanced Routing WG (AdRou-WG): A constant challenge

This group is coordinated by Eriko Porto, an engineer in charge of NEG - RedCLARA's Engineering Group. The AdRou-WG's objective is to analyse the routing demands of NRENs for the applications used in the institutions and for the matrix of traffic exchange between these institutions and destinations within and outside Latin America. The idea is that NRENs can use these demands and the resources available (equipment, hired links, available bandwidth, etc) to plan an optimal routing scheme and to suggest the suitable configurations to put it into practice, and thus fulfil the demands of researchers and their collaboration projects.

The Advanced Routing WG has 14 members, including engineers and researchers, responsible for the operation and development

of many of the academic networks connected to RedCLARA. According to Porto, the group has managed to “carry out several videoconferences that have been very productive in terms of the results of the discussions, and we keep on exchanging ideas via e-mail through the discussion list”.

Eriko, what have been the specific achievements of the WG? Today we need to explore solutions by making use of quality service and advanced routing tools that are not used at large-scale in international backbones that have been operating

for a longer period of time. After the emergence of new regional networks such as RedCLARA itself and the various interconnections among these networks, engineers and operators are witnessing several asymmetry problems in return pathways and in unwanted pathways for traffic exchange applications, i.e., a routing that is not optimal, which hampers the performance of applications in international collaboration projects.

Since there isn't a tested solution for the problem, we have to keep on technically discussing over which solution could be the best not only to fulfil the demands of our network, but also to consider its peculiarities. So far, we are still constantly discussing on the subject and some promising proposals and ideas have already emerged, but we haven't reached an agreement, since these matters are still in constant growth and require more time to reach a conclusion.

What are the group's goals until the end of the ALICE project?

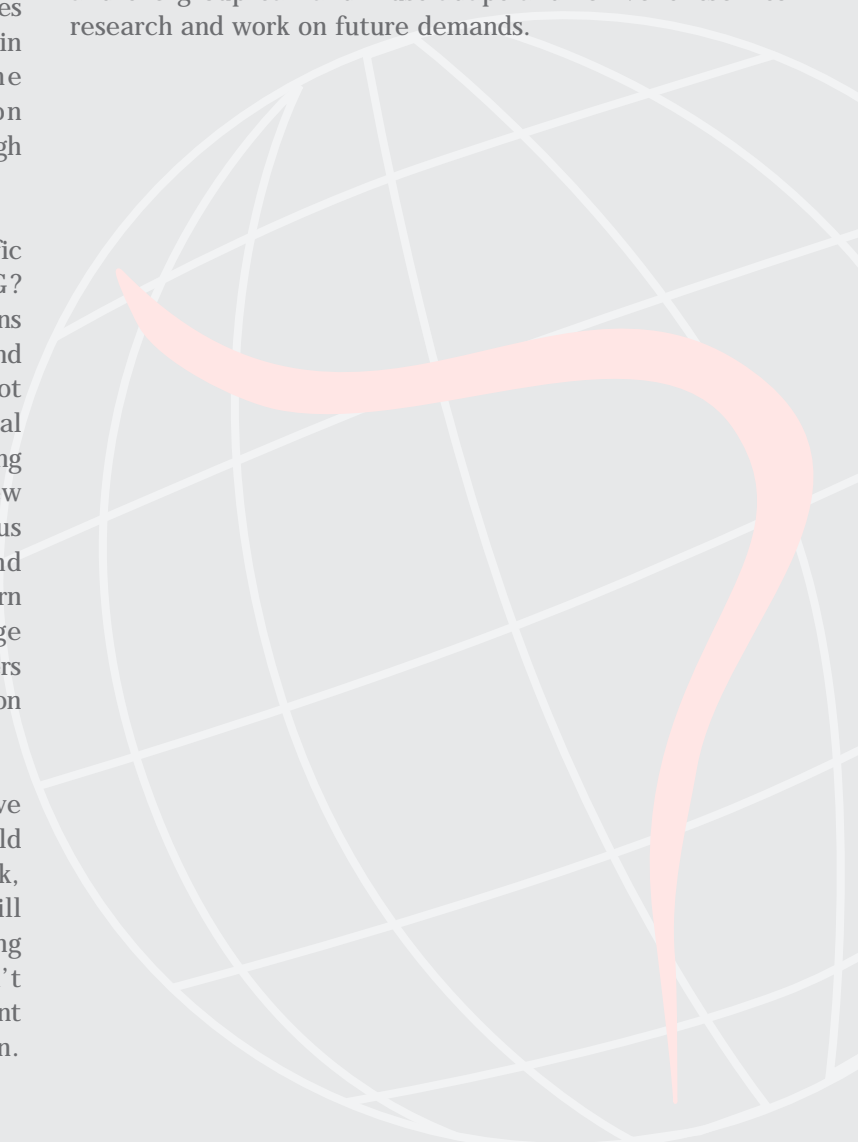
We are working on three inter-related goals:

- 1 - To deliver a global routing plan for RedCLARA, optimising the use of our international links.
- 2 - To implement quality-service architecture for applications, including a policy for their use.
- 3 - To work on a tool for the control and record of IPv4 and IPv6 prefixes announced by the Latin American NRENs.

According to Porto, this group will constantly have new routing topics to improve, due to the new traffic exchange agreements, link enlargement, and the emergence of new networks and the high dynamism of systems. The same thing happens with protocols, which are constantly changing like IPv4 and IPv6, dark fibre links using Gigabit and 10Gigabit Ethernet. There is a need for greater use of Layer 2 protocols.

Coordinator comments:

I think new challenges will come up as the network grows, and the group can and must adapt and reinvent itself to research and work on future demands.



Measurements WG: In search of measurements improvements



The Measurements WG is coordinated by Hans Reyes Chávez, from the University Corporation for Internet in Mexico -CUDI- also in charge of RedCLARA's NOC (Network Operation Centre). The main objective of this group is to develop and implement monitoring and performance measurement systems that provide the necessary information to measure the performance of the network and to detect and predict situations affecting its proper functioning.

The idea is to determine the variables that the system will have to measure; to develop and/or implement monitoring tools; and to visualise and obtain reports offering enough information to quantify the network's good performance.

There are currently seven people taking part in the group. In their networks, they are responsible of a measurement group and work in the operations centres. Reyes tells us that participation has come mainly from two NRENs, which have performed measurements for the EELA Grids project.

Hans: What have been the specific achievements of the Measurements WG?

We have performed several measurements with Latin American (NREN-LA) and European NRENs, and we participated in an event in Brazil where we were invited to take part in the development of a monitoring system called perfSonar.

Last year we were able to install two high-performance servers in each RedCLARA POP. They already have programmed based in Open Code, which allow us to measure services performance in each part of the Backbone. NOC and NEG have access to these servers and have been able to use them to carry out performance measurements in NRENs from Latin America, the USA and Europe, and to develop graphics for the use of links and traffic characterisation. We are currently working on them in order to install more End to End diagnose tools that enable us to evaluate the quality of the services offered by RedCLARA's Backbone.

What are the group's goals until the end of the ALICE project?

One goal is to implement systems to monitor the services offered by Latin American advanced networks.

Reyes comments that, currently, there are many efforts in North America and Europe to measure the quality of the services offered by advanced networks and, therefore, one of this group's strongest projections is to try to incorporate Latin American NRENs into those measurement groups. This is what they are currently working on.

Coordinator comments:

Many Latin American NRENs request quality tests of the services offered by RedCLARA, but most ways of measuring quality are nor defined, and this leads to a lack of certainty in the results obtained, since most of the times there are no previous tests available to compare results. Another problem is the methodology used, since there is no certainty as to which one is the most suitable to measure a given parameter.

Training WG: Levelling knowledge



Iara Machado, from the Brazilian National Education and Research Network -RNP- coordinates the Training group. The group's great objective is to promote technical as well as operational knowledge among the NRENs connected to RedCLARA, trying to level knowledge among them all. In addition, they intend to disseminate the use of advanced applications through RedCLARA. Iara tells us that for this purpose, they

are working on the elaboration of a training and dissemination plan defining the two most relevant issues among NRENs and identifying human (instructors) and physical resources available.

All work group coordinators take part in this group, as well as Cathrin Stover, ALICE project Manager, a representative from Colombia, Sandra Jaque, technical manager at REUNA(Chile), María José López, CLARA communications manager, and CLARA training coordinator, José Navarro. This is an open group where any member of CLARA's technical forum can participate, explains Iara, who stresses the importance of having more participants in the group, and ideally having one representative from each NREN.

Iara: What have been the specific achievements of the Training WG?

This group was created at the ALICE Project Meeting in Montevideo, in November 2005. The first thing we carried out was a training event for engineers from the CEDIA network. Then, we conducted a research among NRENs on their relevant topics and resources available, which was presented at the last ALICE Project Meeting in Quito. We are currently working on the organisation of a training event during the next CLARA-TEC meeting in El Salvador.

What are the group's goals until the end of the ALICE project?

To carry out training events during CLARA meetings; to prepare didactic material on the topics proposed by the NRENs in order to promote future training events.

Iara tells us that when the ALICE Project comes to an end they intend to have formed a community which deals with the challenge of training NREN technicians and promotes network use through the joint organisation of training events.

Coordinator comments:

The attainment of the same level of knowledge in all the CLARA project's NRENs will generate an integration framework among networks, and it will also create cooperation channels and information sources, helping us thus to find solutions for specific problems in our communities. The dissemination of advanced applications, such as Videoconferences, Digital Video distribution, Voice over IP, among others, will allow us to increase scientific cooperation in our countries. I invite all those who want to take part in this challenge to join our discussion group.



7th IEEE International Symposium on Cluster Computing and the Grid

The Symposium will take place in Rio de Janeiro, Brazil, between the 14th and the 17th of May 2007. The due day to send papers is on 15th of November 2006. For more information please visit the Website (<http://ccgrid07.lncc.br/>).

Maria Paz Mirosevic

CCGrid 2007 is the seventh in a series of successful international symposia and for the first time will take place in South America - in Rio de Janeiro, Brazil. Grid Computing started as a generalization of Cluster Computing, promising to deliver unprecedented levels of parallelism to highperformance applications by crossing administrative boundaries. Subsequently, this vision evolved to support on-demand access and composition of any computational service, provided by multiple independent sources. Under this new vision, Clusters gained renewed importance as the "superservers" of the emerging Grid infrastructure. Meanwhile, the use of computational and data resources in high-performance applications, undertaken over Grid infrastructure, have started to now become a reality. Today we face the huge challenge of making on-demand access to any computational service, the "computing as service" vision, a wide-spread reality. The CCGrid Symposium has been part of this journey, bringing together researchers and practitioners and enabling them to share their insight, results, and experience in the multifaceted areas of Grid and Cluster computing. Selected papers will be invited to a Special Issue of Concurrency and Computation: Practice and Experience (<http://www3.interscience.wiley.com/cgi-bin/jhome/77004395>).

Topics

The areas of interest include, but are not limited to, the following:

- Grid Architectures and Systems
- Middleware for Clusters and Grids
- Grid Architectures and Systems
- Middleware for Clusters and Grids
- Resource Management
- Peer-to-Peer Systems
- Grid Trust and Security
- Community networks
- Scheduling and Load Balancing
- Parallel and Wide-Area File Systems
- Grid Economies and Service Architectures
- Grid Economies and Service Architectures

- Utility Computing Models for Clusters and Grids
- Programming Models, Tools, and Environments
- Performance Evaluation and Modeling
- Grid-based Problem Solving Environments
- Service Composition and Orchestration
- Community and collaborative computing networks
- Scientific, Engineering, and Commercial Applications
- Support for Self-Managing/Self-Configuring Grid Infrastructure

Information to Authors

Authors are invited to submit original papers of 8 pages maximum. Papers should be double column text, using single spaced 10 point size type on Letter(8.5"x11"), and follow the IEEE manuscript guidelines.

Submission is on-line only at the symposium web site or directly at the JEMS site. File format must be PDF. Proceedings will be published by the IEEE Computer Society. **E l e c t r o n i c o n l y s u b m i s s i o n a t** <https://submissoes.sbc.org.br/ccgrid2007>.

Submission implies the willingness of at least one of the authors to register and present the paper. Workshops, Tutorials, and Posters Workshop proposals should be 4 pages maximum. Tutorials are 4-four pages long and require a 5th-page description including the presenters' vita and contents to be presented. Poster submission should be 2 pages maximum. Submission is on-line only at the symposium web site or directly at the submission site. File format must be PDF. These rules should actually be asked to the appropriate chair.

According to European Commission:

Seventh Framework Programme Increase Europe's Growth and Competitiveness

FP7, the EU's chief instrument for funding scientific research and technological development over the period 2007 to 2013, is one of the most important elements in realising the Lisbon agenda for growth and competitiveness.

The call for proposal of the Seventh Framework Programme will be done in the beginning of 2007, and the official launched is programmed for march 2007, during the event called "Evening on European research", which will take place in Brussels.

The Seventh Framework Programme (<http://cordis.europa.eu/fp7/faq.htm#1>) is the next programme in a series of multi-annual Framework Programmes that have been the European Union's main instrument for funding research and development since 1984 - as provided for by the Treaty establishing the European Community.

The FP is proposed by the European Commission and adopted by Council and the European Parliament following a codecision procedure. FPs have been implemented since 1984 and cover a period of five years with the last year of one FP and the first year of the following FP overlapping. The current FP is FP6, which will be running up to the end of 2006.

In the Commission's proposals for the Seventh Framework Programme (http://cordis.europa.eu/fetch?ACTION=D&SESSION=&DOC=1&TBL=EN_DOCS&RCN=6797&CALLER=FP7_LIB) to the European Parliament and the Council of 6 April 2005, the Commission proposed that the maximum overall amount for Community financial participation in the EC Seventh Framework Programme should be EUR 72 726 million for the period 2007 - 2013. For nuclear research and training activities carried out under the Euratom treaty EUR 3092 million are foreseen for 2007-2011.

The Programmes for FP7
The proposed Seventh Framework Programme will be

organised in four programmes corresponding to four basic components of European research:

Cooperation

Support will be given to the whole range of research activities carried out in trans-national cooperation, from collaborative projects and networks to the coordination of national research programmes. International cooperation between the EU and third countries is an integral part of this action.

This action is industry-driven and organised in four subprogrammes:

- Collaborative research will constitute the bulk and the core of EU research funding
- Joint Technology Initiatives
- Coordination of non-Community research programmes
- International Cooperation

Ideas

This programme will enhance the dynamism, creativity and excellence of European research at the frontier of knowledge in all scientific and technological fields, including engineering, socio-economic sciences and the humanities. This action will be overseen by a European Research Council.

People

Quantitative and qualitative strengthening of human resources in research and technology in Europe by putting

into place a coherent set of Marie Curie actions (<http://cordis.europa.eu/mariecurie-actions/>).

Capacities

The objective of this action is to support research infrastructures, research for the benefit of SMEs and the research potential of European regions (Regions of Knowledge) as well as to stimulate the realisation of the full research potential (Convergence Regions) of the enlarged Union and build an effective and democratic European Knowledge society. Each of these programmes will be the subject of a Specific Programme. In addition, there will be a Specific Programme for the Joint Research Centre (non-nuclear activities) and one for Euratom nuclear research and training activities (http://cordis.europa.eu/fetch?ACTION=D&SESSION=&DOC=1&TBL=EN_DOCS&RCN=6797&CALLER=FP7_LIB).

Themes

FP7 presents strong elements of continuity with its predecessor, mainly as regards the themes which are covered in the Cooperation programme. The themes identified for this programme correspond to major fields in the progress of knowledge and technology, where research must be supported and strengthened to address European social, economic, environmental and industrial challenges. The overarching aim is to contribute to sustainable development.

The nine high level themes proposed for EU action are the following:

- Health
- Food, agriculture and biotechnology
- Information and communication technologies
- Nanosciences, Nanotechnologies, Materials and new Production Technologies
- Energy
- Environment and Climate Change
- Transport and Aeronautics
- Socio-economic sciences and the humanities
- Space and Security Research

In addition, two themes are covered by the Euratom Framework Programme:

- Fusion energy research
- Nuclear fission and radiation protection

In the case of particular subjects of industrial relevance, the topics have been identified relying, among other sources, on the work of different "European Technology Platforms" (http://cordis.europa.eu/technology-platforms/home_en.html).

New elements in FP7

While building on the achievements of its predecessor, the Seventh Framework Programme will not be "just another Framework Programme". In its content, organisation, implementation modes and management tools, it is designed as a key contribution to the re-launched Lisbon strategy.

The new elements in FP7 include the following:

- Emphasis on research themes rather than on "instruments"
- Significant simplification of its operation
- Focus on developing research that meets the needs of European industry, through the work of Technology Platforms and the new Joint Technology Initiatives
- Establishment of a European Research Council, funding the best of European science
- Integration of International cooperation in all four programmes
- Development of Regions of Knowledge
- A Risk-Sharing Finance Facility aimed at fostering private investment in research

The Official Launch of FP7

On 7 March 2007, high-level representatives of the German EU Presidency and the European Commission will open a major event on European research in Brussels. The event will begin with an "Evening on European research", which will comprise:

- Speeches by high-level representatives of the German Presidency and the European Commission
- The opening of the public exhibition "Today is the future" (working title)
- The award ceremony for the Descartes Prizes for collaborative research and science communication.

This event will mark the launch of the Seventh Framework Programme 2007-2013. The overall aim of the event is to raise the level of political commitment to European research, expand media coverage and increase public awareness.

The event will be composed of Political speeches and an attractive public exhibition and will be open to the public, with special emphasis on the media and young people (school), from Wednesday 7 March to Sunday 18 March 2007. The 'European research' evening will target Heads of State and Government, Ministers and the media. The calls for proposals under FP7 will be set out in annual work programmes which will provide details about the topics, timings and implementation. The Commission is drawing on a wide range of inputs and advice for the preparations of these work programmes.

For more information please visit the **European Union Website about FP7** <http://ec.europa.eu/research/fp7/> , or the **CORDIS guide** in <http://cordis.europa.eu/fp7/>.

Call for competition: **MERCOSUR Prize for Science and Technology**

The MERCOSUR Prize for Science and Technology 2006 is promoted by MERCOSUR's Science and Technology Specialised Meeting - RECyT - and the United Nations Educational, Scientific and Cultural Organisation UNESCO, and is sponsored by PETROBRAS. The Prize is aimed at students and researchers who have worked in the area of "Technologies for Social Inclusion". This includes the creation, development, adaptation, use, promotion and evaluation of methods, processes and products aimed at improving the quality of life and at incorporation into society. The Prize categories are: "Scientific Initiation", "Young Researcher" and "Integration".

The objectives of the Prize are to acknowledge and reward the best works by students, young researchers and research teams that represent a potential contribution to scientific and technological development for MERCOSUR member and associate countries; to encourage the development of MERCOSUR-oriented scientific and technological research; and to contribute to the regional integration process among MERCOSUR member and associate countries by increasing the promotion of achievements and advances in the area of scientific and technological development in the MERCOSUR.

All MERCOSUR member countries can participate - Argentina, Brazil, Paraguay, Uruguay and Venezuela - as well associate countries: Bolivia, Colombia, Ecuador and Peru. The deadline for submitting papers is 8 December 2006. For further information on the Prize, please download it from

<https://www1.unesco.org.br/premiomercosul/reglamento.pdf#search=%22premio%20mercosur%20de%20cienc>

A G E N D A

O C T O B E R

Third International Workshop on Grids Applications, GridNet 2006

October 1-2. San Jose, California, USA
<http://www.broadnets.org/2006/>

Gelato ICE: Itanium® Conference & Expo

October 1-4 – Biopolis, Singapore
http://www.ice.gelato.org/pdf/gelatoICE_attendee.pdf

4th North American Ornithological Conference

October 3-7 – Veracruz, Mexico
<http://www.naac2006.org/es/default.htm>

Second International Congress on Education

October 4-6 – Obregon, Sonora, Mexico
<http://www.itson.mx/congresoeducacion/index.html>

5th Annual ASEE Global Colloquium on Engineering Education

October 9-12 – Rio de Janeiro, Brazil
<http://asee.org/about/events/conferences/international/2006/index.cf>

ICTP Workshop

October 9-20 – Trieste, Italy
<http://www.ictp.it/>

Microsoft e-Science Workshop

October 13-15 - Bloomberg Center, The Johns Hopkins University, Baltimore, Maryland, USA
<http://www.ms06.net/>

World Conference on e-Learning 2006

October 13-17 – Honolulu, Hawaii
<http://www.aace.org/conf/elearn/call.htm>

6th Telemedicine Informatics Workshop

October 18 – Arturo Prat University, Victoria, Chile
<http://www.taller2006.unapvic.cl/>

CUDI Autumn Meeting 2006

October 19-20 – San Luis de Potosí, Mexico
http://www.cudi.edu.mx/otono_2006/index.html

7th Latin American Meeting of Digital Cities

October 23-24 – Segovia, Spain
<http://www.ahciet.net/Agenda/Evento.asp?idEvt=144&a=2006>

1st Latin American Conference on Learning Objects LACLO 2006

October 23-27 – Guayaquil, Ecuador
<http://www.learningobjects2006.espol.edu.ec/index.php?cf=1>

8th International Symposium on Educational Informatics (SIIE06)

October 24-26 – School of Industrial and Informatics Engineering, Verganza Campus, University of León, Spain
<http://siie06.unileon.es/welcome.php>

eChallenges e-2006 Conference

October 25-27 – Barcelona, Spain
<http://www.echallenges.org/e2006/>

4th Latin American Web Congress LA-WEB 2006

October 25-27 – University of the Americas, Puebla Cholula, Mexico
<http://www.la-web.org/>

International Special Topic Conference on Information Technology in Biomedicine (ITAB 2006)

October 26-28 – Ioannina, Epirus, Greece
<http://medlab.cs.uoi.gr/itab2006/>

International Conference on Information Technology in Cultural Heritage

October 30-November 4 – Cyprus
<http://www.vast2006.org/index.html>

N O V E M B E R

Annual Meeting of the Society for Social Studies of Science

November 2-4 – Vancouver, Canada
<http://www.4sonline.org/meeting.htm>

Research Seminar: Latin America – Europe Migrations: Challenges for Analysis and Policy-making

November 8 – Catholic University of Louvain, Belgium
<http://www.obreal.unibo.it/news.aspx?Action=Data&IdNews=134>

2nd Congress for Forests and Pastures Fires in the MERCOSUR

November 7-10 – Malargüe, Mendoza province, Argentina
parquesnacionalesorg@yahoo.com.ar

SC06: International Conference on high-performance Computing, networks, storage and analysis

November 11-17 – Tampa, Florida, USA
<http://sc06.supercomputing.org/>

8th Latin American Congress on Educational Informatics

November 13-15 – San José, Costa Rica
<http://www.una.ac.cr/RIBIE>

3rd ONLINE Congress of the Observatory for Cyber Society

November 20 – December 3 – Online version
<http://www.cibersociedad.net/congres2006/presentacio.php?llengua=es>

Magnum International Congress on CIC-IPN Computing

November 21-24 – “Jaime Torres Boder” Cultural Centre, Auditorium B, Mexico City
<http://magno-congreso.cic.ipn.mx/esp.html>

CLARA-TEC, ALICE AND CLARA Meetings

November 20-22: Training Meeting for CLARA Technicians
 November 23-24: CLARA-TEC Meeting
 November 25-26 (morning): ALICE Meeting
 November 26 (afternoon): CLARA Meeting
 Meetings will be held in San Salvador, El Salvador. Organized by RAICES
<http://www.redclara.net>

15th International Meeting on Distance Education

November 27 – December 1 – Guadalajara, Mexico
<http://www.udgvirtual.udg.mx/encuentro/>

D E C E M B E R

Fall 2006 Internet2 Member Meeting: Ten Years and Looking Forward

December 4-7 – Hyatt Regency Hotel McCormick Place, Chicago, Illinois, USA

<http://events.internet2.edu/2006/fall-mm/calls.cfm#proposals>