DeCLARA

Year 1 - Nº 1, April 2005
Bimonthly bulletin

Editorial

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Year 2005 begins, a year that will see completely installed the First Latin-American Investigation and Education Network: RedCLARA. This new regional infrastructure, financed in an 80% by the European Commission, through the ALICE Project, comes to make specific a dream long caressed by the National Research and Education Networks of Latin America. It is thanks to this deep identification between the countries' wishes and to the proposal done by the European Commission, that this project advances in a successful way, as much as to get to cover during year 2005 the 100% of the regions countries.

The enthusiasm generated by ALICE was clearly showed in the creation of CLARA, the Latin American Cooperation of Advanced Networks, formed to develop and to make sustainable this key infrastructure for the scientific development, as well as for the generation of virtual spaces of integration of the universities and research centers of the region in the long term. It was in June of 2003, in the city of Valle de Bravo, in Mexico, where the Statutes of CLARA were signed, they gave birth to a non profit International Organization that was recognized by the Government of Uruguay in December of the same year.

Since then CLARA has crossed a fast way of successes and consolidation. The operation of a Provisory Directive Board from June of 2003 to November of 2004, has taken step to a Directive Board chosen by the member institutions in its Assembly of November 25, held in Rio de Janeiro. During the first year of its operation, CLARA obtained the recognition of the even organizations of the rest of the world, being listened and being invited to participate in Seminaries, international Conferences and Forums, signing Memorandums of Understanding (MoU) with organizations like Internet2 and APAN, in addition to being recognized as Official Partner of the ALICE Project.

In November of 2004, with the intention of fortifying the CLARA institution and to make its operation more organic and permanent, whom subscribes was named as the Executive Director. This fact also generated an extremely positive answer in the international community of networks, since it clearly demonstrated the commitment of the institutions partners of CLARA towards it by assuming permanent commitments of financing. The Executive Director enjoyed immediately the prestige that CLARA has acquired, being received with great cordiality in the European Commission, where great expectations exist respect to the role of CLARA in the long term sustainability of the ALICE Project and of RedCLARA.

In addition to the good relations with our European partners, CLARA has consolidated cooperation bows with numerous network international organizations, such as: Internet2, APAN and CCIRN. Also, important bonds with the IADB, the World Bank, the NSF and the OAS have settled down. Organizations who we are sure will contribute in the next future to the consolidation and development of CLARA and RedCLARA.

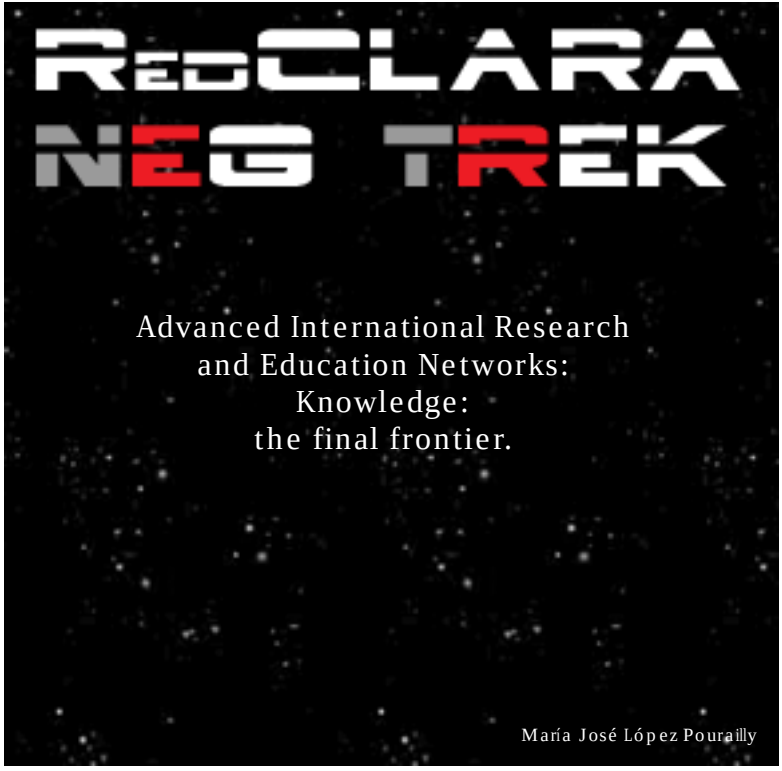
As an example of this contribution we can indicate the WHREN/LILA Project, that will allow to connect RedCLARA to the USA through dedicated connections from two of the Backbone Nodes of RedCLARA: Tijuana and Sao Paulo.

At the moment in which this bulletin –DeCLARA- is born, RedCLARA Backbone its operative, with the networks of Argentina, Brazil, Chile and Mexico all active. To these the networks of Panama, Peru and Uruguay will be united, in less than a month.

Year 2005 will witness the end of the Phase of Installation of RedCLARA, with all the partners of CLARA connected to it. Its sustainability will depend on our capacity to continue working together to make of this infrastructure an essential pillar of the university and scientific development of our region.

DeCLARA will be a bridge of communication between the partners, lets use it to spread our activities; let us constitute it in an abundant, pertinent and opportune source of intelligence. You are all sincerely invited to contribute.

Translation to english:
María José López Pourailly



These are some of the most important reports of the voyages of the CLARA Network Engineering Group - NEG. Its mission: following the route drawn up by the crew of the ALICE Proyect -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 have been taken of captains Eriko Porto diary.

NOTE: In order to simplify your lecture, it is highly recommended to be aware of some codes: AR – Argentina, BR – Brazil, CL – Chile, MX – Mexico, VE – Venezuela, PA – Panama, PE – Peru, NREN – National Research and Education Network

Friday 27th, August 2004

The partial activation of CLARA backbone it's on it's way. For the following weeks we expect that all the NRENs contacts centralize their efforts with CLARA-NEG in order to smooth the migration to and activation of the original network design.

Thursday 16th, September 2004

The provisional backbone is operational since 31st of August with REUNA (CL) as the only client, at the present time, of CLARA backbone. RNP (BR) was experiencing some problems to import 1000BASE-ZX transceivers (GBICS), but the problem has been partially solved today and we expect to connect another client to CLARA by tomorrow. For the next Monday (20th of September) is scheduled the installation of two other new 12k Cisco routers: the PoP in BR and the PoP in PA. After the installation and testing of them, if everything goes fine, we will start to plan the migration from the provisional backbone to the original topology, including the connection of RedCyT (PA), for the middle of next week.

Monday 20th, September 2004

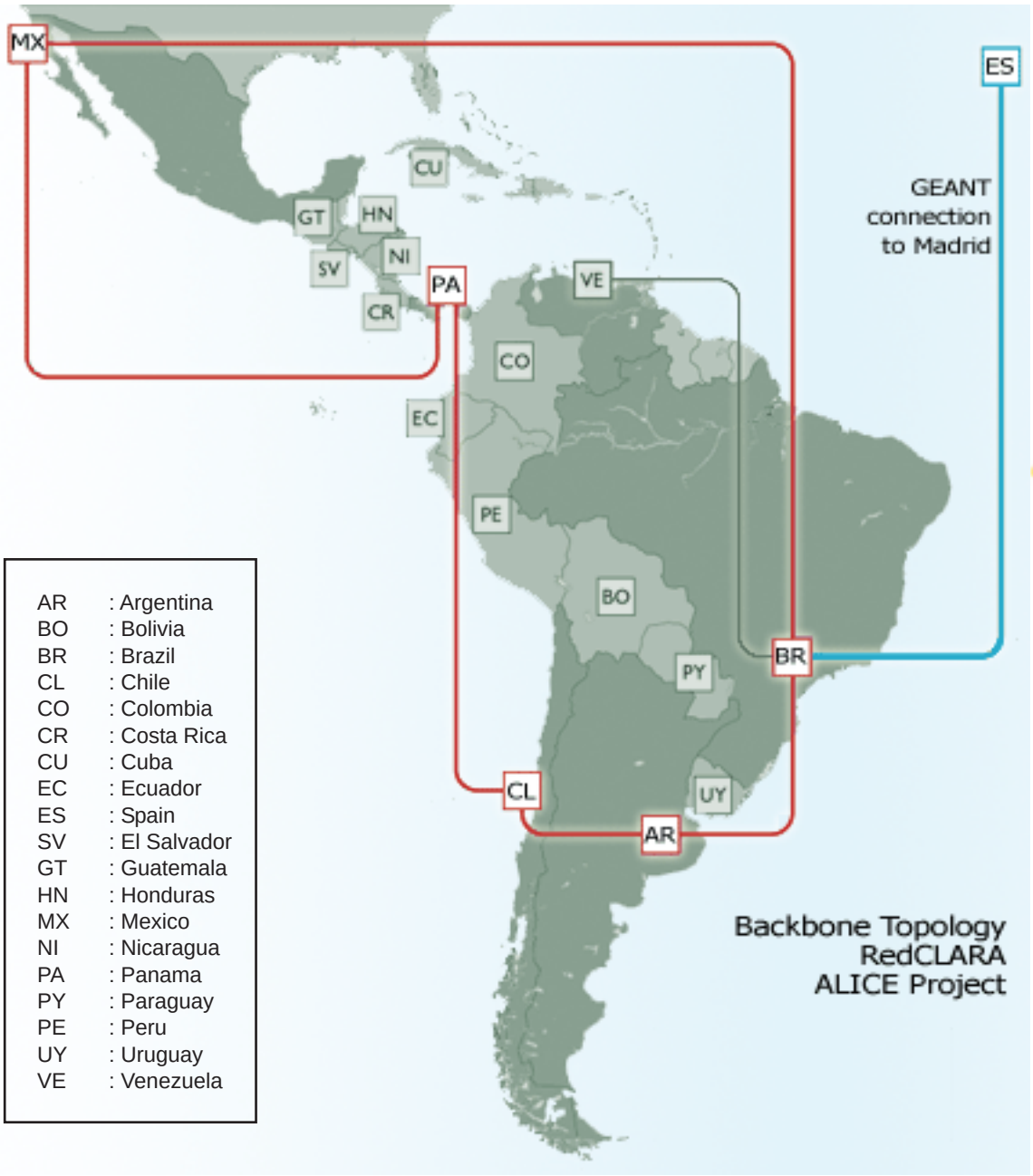
RNP (BR) is connected to CLARA network since 11:00 GMT-3 today. This connection uses the provisional backbone (Juniper router) that is operational since 1st of September.

Friday 24th, September 2004

We will coordinate with all involved NRENs in order to have the network operating with the Cisco routers (original plan) by the end of next week. We are now planning the migration from this provisional backbone to the original one along the next week.

Tuesday 5th, October 2004

The CLARA backbone is now operating with two Cisco 12006 routers installed at the PoPs of Sao Paulo (BR) and Santiago (CL). The connection between these two routers is still going trough the by-pass inside the rack of Buenos Aires PoP, because of some delays in the importation process of the AR router. The router of the PoP in PA is already installed and tested, but yet not connected to the backbone. The circuits from Sao Paulo to Caracas (VE) and from Sao Paulo to Tijuana (MX) are connected at the Brazilian router and looped back. We initiate a 24 hr self-ping test at the link to Caracas, and if everything goes ok with the test, we expect to activate the peering with REACCIUN (VE) before the end of this week. After this activation we will initiate the tests for the circuit from BR to MX.



AR	: Argentina
BO	: Bolivia
BR	: Brazil
CL	: Chile
CO	: Colombia
CR	: Costa Rica
CU	: Cuba
EC	: Ecuador
ES	: Spain
SV	: El Salvador
GT	: Guatemala
HN	: Honduras
MX	: Mexico
NI	: Nicaragua
PA	: Panama
PY	: Paraguay
PE	: Peru
UY	: Uruguay
VE	: Venezuela

ALICE
America Latina Interconectada Con Europa
www.dante.net/alice

RedCLARA

Wednesday 27th, October 2004

The activation of the router in AR was successful. All the NRENs involved in the process acted perfectly, specially the engineers Alejandro Borras from RETINA (AR), Cristian Henry from REUNA (CL) and Marcel Rodrigues from RNP (BR), their help was invaluable to accomplish the migration in a minimum time. The collaboration spirit and fortitude demonstrated by the staff of these NRENs, working around many difficulties that arose during this process of activation of the CLARA network, has been a great deal towards our goal of integration between the science and research global community, and specially in the extent of our Latin America.

CLARA network is now operating with three PoPs activated: AR, BR and CL. We expect to activate one more in PA very soon.

Now we will work on the addition of the clients from VE, AR and PA. Next step is going to be: activation of the PoP in MX and addition of the NRENs from MX and Peru.

October 7th, 2004: with the participation of Pilar Armanet, Head of the Division of Superior Education of the Ministry of Education; Eric Goles, president of CONICYT, directors of Universities and representatives of the European Community, REUNA (National University Network - Chile) gives by inaugurated the connection of Chile to the pan European advanced academic network GÉANT and to RedCLARA (Latin American Cooperation of Advanced Networks), obtained in the context of the ALICE Project.

We invite you to review this news in: http://apc.reuna.cl/rml.shtml?http://apc.reuna.cl/reuna3.shtml?AA_SL_Session=004749d2266bà90be440e1842007575&x=5349.

Review the video that commemorates and explains the importance of this new connection, and remember some of the landmarks marked by REUNA
(MPG2 Format - 271,84 MB): http://www.reuna.cl/consorcio/ram/reuna_geant.m2p.

Thanks to the new pan Latin-American network and its union to Europe, RedCLARA RETINA2 incorporates Argentine universities to the World-wide Research and Development Network

On December 2nd of 2004, with the inauguration in CRIBABB of the connection to the Academic Network RETINA2, one more step is given ahead and the doors to a new Research and Development World-wide Network, through the connection to RedCLARA (that will contribute without a doubt with the regional development), are opened for the academics and scientists of Bahía Blanca.

Bahía Blanca was one of the first cities of the interior of Argentina in counting with Internet connection, and today it shows interconnected to each other the networks of the Universidad Nacional del Sur, of the Regional Faculty of the UTN and of the CRIBABB. These institutions can access to this new generation of on-line cooperation resources with a high quality of service, that shortly -like in the leading countries- will represent the scientific and academic network.

Through these connections, from Bahía Blanca it would be possible to access to e-Science, that involves all the disciplines and allows the use of complex devices in remote form (electron microscopes, telescopes, sensors, etc.), the transference of great volumes of information, systems of videoconference and educative applications outposts that fundamentally facilitate and promote the collaborative work between research groups of different countries or regions.

This acquired goal is the result of the joint work between the academic network Retina2, CRIBABB and the company COMSAT International.

Thursday 18th, November 2004

The activation of the router in Tijuana (MX) was a success. Finally the five routers of CLARA are installed in their racks and tested.

The routers from CL, AR, BR and MX are connected and configured with BGP and Multicast, only waiting for the NRENs that are not connected yet to finish their local loop activation. Still, there are some minor logistic problems that are preventing CUDI (MX), RETINA (AR) and REACCIUN (VE) to activate their peering session with CLARA backbone, but these issues will be solved before the end of this month.

The router in PA, although installed in the rack, is not connected yet. We are waiting for the internal patch cords –that are being acquired by DANTE- to install them soon and finally connect the interfaces of the router to the circuits. The ring of the backbone will be promptly closed. Mission will be achieved.

The circuit between Tijuana (MX) and PA is under test now.

Almost all PoPs have already received their LAN kit for completion of the PoP, and we are going to initiate the installation for the next weeks. This installation is going to be taken care with the aid of the NRENs engineers.

Thursday 23rd, December 2004

The connection of the router in PA has been scheduled for December 27th (Monday). Then the ring of the CLARA backbone will be finally closed.

During January I'll be traveling to AR, CL, PA and MX -where the network PoPs are installed- to supervise the local network equipment installation (switch, router and servers), and to strengthen the contact between CLARA NEG and CLARA members. Seems to be a good experience.

I think we are in conditions to finish the hardware installation. Hopefully in MX I will be helpful to prepare the NOC so we could finally have our Network totally operative in January, also with the capacity to offer our advanced services of IP network.

RAGIE presented to the Guatemalan university students the new technological freeway: Internet of Second Generation

The overwhelming desire that hundreds of Guatemalan university students have to nourish their knowledge will de widely rewarded, because Guatemala will promptly count with a tool that will allow them to raise a step more in the pyramid of computer science by means of the second generation of Internet. For this, the Advanced Guatemalan Network for Research and Education (RAGIE) have worked for more than a year and a half in a project of greater reach called ALICE (abbreviation of Latin America Interconnected with Europe), that will put all its top technology to the service of the university community of Guatemala.

We invite you to review this news in:
http://www.redclara.net/downloads/documento/Conexion_establecida_RAGIE.pdf.

Thursday 17th , March 2005

Everything is going fine. The next NRENs to be connected to CLARA network are the ones from Uruguay (RAU) and Peru (RAAP). For the connection with RAU we have concluded all the technical discussions and we are finalizing now the contract with ANTEL (provider of the connectivity), we expect to activate this peer for the next month.

For the connection with RAAP the NREN is ready. We are experiencing some delay to import the line card for the CLARA router in Santiago, but the card was already sent and we expect to activate this peer at most in the next week. We are proceeding now with the technical discussions with Telmex, who is going to provide the connectivity for Nicaragua, Guatemala, Costa Rica and El Salvador. The discussions are very well advanced and we have a connectivity forecast for April to these NRENs. For the remaining NRENs we still have to wait for the tender results, in order to start the technical discussions with the selected providers.

In one first stage
RAAP (Peruvian Academic Network)
will connect five universities and two
research centers.
In the second phase of implementation
there will be more research institutions
of the interior of Peru integrated.
It is hoped to make an inauguration by the
end of April, agreeing with the date of
official foundation of RAAP.

* *

Warning: The mission of RedCLARA NEG it is been accomplished in this moment, and of course the pages of Captain Eriko Porto diary are still being fulfilled. Maybe in the future we will have the chance to establish a new communication with you readers just to put the final stop point to this history, the NEG Trek. Remember: Knowledge is the final frontier.

High Speed Network will interconnect Colombian universities

On May Colombia will count with an National Academic High Speed Network (RUNAV), that will allow the universities to develop research projects on-line and to interchange scientific information with more than 700 superior education institutions of America and Europe.

(Original publication source of this news: Ministry of Communications, Republic of Colombia. To see the complete news in the Web of the referred Ministry: http://www.mincomunicaciones.gov.co/mincom/src/index.jsp?page=./mods/contenido/noticia_user_view&id=91)

Bogota, February 25 of 2005. The Ministers of Communications, Martha Pinto de de Hart, and of Education, Cecilia María Vélez, met with the universities to present the advances of the project that counts on the support of the Agenda of Connectivity, that has destined near $2,680 million for the interconnection of the regional networks and the connection to the advanced international networks.

The superior education institutions connected to the National Academic High Speed Network will be able to use the new generation services and tools in processes of research and education, such as virtual laboratories, digital libraries, centers of virtual education, high resolution video conference, super-computing centers, nonexistent in the country scientific and technological instruments, and participation of world-wide advanced research groups, between many other alternatives.

During the speech given to the representatives of the Universities, the Minister of Education, Cecilia María Vélez, showed that with the National Academic High Speed Network and the relation that will be settle down with the research centers of abroad, it is hoped to improve the quality of the Colombian education.

On the other hand, the Minister of Communications, Martha Pinto de de Hart, emphasized the effort done by the Colombian Government to promote the use of the new Information and Communication Technologies in the educative field and remembered that in addition to the creation of RUNAV Network, the Communications Ministry has destined resources to interconnect with broadband 3 thousand state schools of the country.

The Director of the Agenda of Connectivity, Hernán Moreno Escobar, declared that the High Speed Network will allow Colombia to give a great jump in its development, and he asked the universities to commit in the consolidation of it.

He explained that the project has a first stage that will have to be concluded in May of this year, where the different regional university networks will have to be interconnected, for which an agreement with Colombia Telecommunications (TELECOM) has been signed.

Later, in June, RUNAV will be interconnected with RedCLARA, implemented with economic resources of the European Community and of the Latin American countries within the framework of the ALICE project (América Latina Interconectada con Europa – Latin America Interconnected to Europe), with marshalling areas in Chile, Argentina, Brazil, Mexico and Panama. This network counts with a connection to the pan European advanced network (GÉANT) and in the course of the present year it will establish the connection with Internet2.

East meets West

Project TEIN2 will create the first regional research network for the South East Asia

Research collaboration between Europe and Asia received a massive boost recently with the announcement of Phase 2 of the TEIN2 project. Following a successful feasibility study, the European Union's EuropeAid Co-operation Office has given the go ahead for the creation of the TEIN2 network.

TEIN2 will connect up to 10 regional partners in Asia (Brunei, China, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam), to each other, and provide direct connectivity to GÉANT2. Currently, wide disparities exist in the state of research and education networking in these countries. Some, like Korea, have advanced research networks. Others like Thailand and Vietnam are in their infancy. TEIN2 will stimulate the development of these countries' national networks, addressing the region's digital divide. Chalermpol Charnsripinyo, spokesman from the Thai partner, ThaiREN said:

"The current inter-connectivity of NRENs amongst these countries is still insufficient to support Research and Education activities. The TEIN2 project will be able to support current R & E activities and enhance international research collaboration in the future."

TEIN2 builds on the success of the TEIN project, which saw the establishment of a link between France and Korea, operational since November 2001. Demand for access to this connection far exceeded expectation, and demonstrated the need for further links at increased capacity.

DANTE has announced a call for tenders to Telecoms providers. Expressions of interest must be submitted to DANTE by 8th January. More information can be found at www.dante.net/tein2. The network will be operational in late 2005.

More information in: http://www.tein2.net/.

Awards + Grants

Grants

Marie Curie Conferences and Training Courses:
http://fp6.cordis.lu/fp6/call_details.cfm?CALL_ID=192
Date of closing: May 18th

Premios a la Ciencia UNESCO:

Sciences Award: www.unesco.org/pao/unesco-science-prize.htm
Closing date: May 10th.

Carlos J. Finlay Award:
www.unesco.org/pao/finlay_science_prize.htm
Closing date: May 10th.

Javed Husain for Young Scientists Award:
www.unesco.org/pao/javed.htm
Closing date: May 15th.

MAB (UNESCO Programme of the Man and the Biosphere) Award for Young Scientists: www.unesco.org/mab/
Closing date: May 15th.

Kalinga Award for Scientific Dissemination:
www.unesco.org/pao/kalinga.htm
Closing date: May 10th.

Of the Water International Award "Great Artificial River":
www.unesco.org/water/ihp/prizes/great_man/
Closing date: May 15th.

International Sultán Qaboos Award, for the Environment Preservation: www.unesco.org/mab/qaboos/sutanq.htm
Closing date: May 15th.

L'ORÉAL-UNESCO Award: www.loreal.com/loreal-women-in-science/index.html
Closing date: August 15th.

GÉANT2
A new Star, the Seventh Generation

Co-funded by the European Commission (EC) and the European National Research and Education Networks, GÉANT2 -handled by DANTE (Delivery of Advanced Technology Network to Europe)- is the seventh generation of the pan European Research and Education Network, and successor of the of pan European Research multi-gigabit Network: GÉANT. The project that gives life to GÉANT2 counts on a financing by four years that, officially, began to operate the on September 1st of 2004. From that date, the EC began the delivery of their contribution that, by a total value of 93 million Euros, will be complemented by the contributions of the involved European National Networks. The launching of this network, that will be carried out in the city of Luxembourg, is dated for the middle of 2005.

María José López Pourailly

The GÉANT2 network will provide the high-performance, state-of-the-art network infrastructure that is fundamental to the European Union's vision of a European Research Area (ERA). The network is the core activity of a coherent set of initiatives that seek to develop all aspects of European research and education networking. The project within which the network is being built and developed also includes an integrated research programme, the development of support services for network users, initiatives to monitor and address disparities in the level of development of research and education networking around Europe, and a comprehensive study into the future of European research and education networking.

The partners in the project are 30 European NRENs, DANTE and TERENA (Trans-European Research and Education Networking Association).

But, what pursues GÉANT2? Let us review its objectives:

* To plan, build and operate a multi-gigabit pan-European backbone research network interconnecting Europe's national research and education networks (NRENs), over which a suite of advanced services will be offered to meet the increasingly demanding requirements of Europe's research and education community.

* To conduct joint research into the development of networking technologies and services, with the primary aim of developing ideas from concept to production service to directly serve the users of GÉANT2 and its connected NRENs.

* To support effectively and directly projects and users who have advanced networking requirements.

* To pursue initiatives targeted at closing the 'digital divide', through both in-depth analysis of the picture of research networking in developing areas and the provision of direct support.

* To examine the future of research networking, exploring the case for the sustaining of research and education networking beyond the conclusion of the project.

GÉANT2 to the day

Respect to the present state of the project, much can be said, for example that GÉANT2 will be officially launch in the middle of 2005 in the city of Luxembourg, that has its own Web site, and -talking about technology- everything indicates that the goals will be reached in the stipulated terms. Let us review what DANTE says in the document "The Works of DANTE", that in its second number -published on December of 2004- and under the title "GÉANT2 Report Status" indicates:

"The procurement for network elements of GÉANT2 is progressing successfully. All the initial tender analysis has been completed and work is well advanced with negotiations and final short-listing. Two separate tender activations were implemented. The first dealt with connectivity, including wavelength and dark fibre connectivity as well as more traditional SDH connectivity. The second tender deals with switching and transmission equipment. In relation to transmission systems, considerable effort has been expended in understanding the technical detail and the economics of lighting dark fibre. We are at the point where we can, on a per-route basis determine whether there is a case for the direct implementation of DWDM systems by the project.

"It is apparent, today, that we will be able to build a network based on a pool of 10Gbps wavelengths interconnecting a set of switches to be deployed at nodes in the GÉANT2 network. These will be interconnected to the existing router base to support IP services, but will also offer direct access to other services based on wavelength and Gigabit-Ethernet technology. Thus the design objective of creating a hybrid network, capable of offering point-to-point connectivity, in addition to a standard IP service, will be achieved from day 1 of the new network.

"The basic architectural assumptions have been discussed and agreed with a group of engineering experts from the NREN's. Work is continuing with lab-tests of the switching and transmission technology to ensure that the claimed functionality actually works. It is envisaged that the final technical and commercial analysis can be completed in January 2005, enabling final procurement decisions to be made during February".

Respect to the Web site -www.geant2.net-, it aims to offer a comprehensive image of the work that is being carried out through the different activities developed within the framework from the project and to guide the attention towards those initiatives that are particularly important for GÉANT2.

GÉANT2 will take off in Luxembourg

The GÉANT2 launching will be carried out in combination with the second e-concertation meeting for e-infrastructures, whose objective is to present and discuss a series of topics demonstrating the powerful combined benefits provided to the research community by GÉANT2 and Grids.

RNP participates in the consortium that will plan services, applications and contents

Digital TV in Brazil: a path to Health Democracy

The first image to appear in the Brazilian TV was that of five-year-old Sônia Maria Dorce, who, dressed as an Indian, said: *"The Brazilian TV is now on air"*. It happened in 1950, in the launching of TV Tupi, which radically changed the course of the history of the media in the country. More than half a century later, Brazil lives a similar moment: the arrival of digital television, which promises to bring interactivity and to transform the relationship of the spectator with the television.

Vanessa Macedo, RNP

The aim of the government is to create a reference model of the Brazilian System of Digital Television (Sistema Brasileiro de Televisão Digital - SBTVD); for this reason, in January 2004, it formed SBTVD Development Committee, made up of the ministries of Communications (MC), Science and Technology (MCT), Culture, Development, Industry and Foreign Trade, Education, Finance, Planning, Foreign Relations, the Presidential Chief of Staff and the Secretary of Government Communication and Strategic Management of the Presidency of the Republic.

After an MC/MCT/Finep and Funttel public notice with the theme Services, Applications and Contents of the Brazilian System of Digital Television, the best projects were selected. In order to make the task more effective, each project was in charge of a theme area aimed at the development of software and models of specific services and contents.

All in all, there are 70 education and research institutions, universities and companies participating in this initiative, which involves more than a thousand researchers and a budget of R$ 30 million. SBTVD Development Committee will be responsible for the general coordination of all the projects, with the technical and financial support of Finep and of the Research and Development Center on Telecommunications (Centro de Pesquisa e Desenvolvimento em Telecomunicações - CPqD).

For the field of health, it gained a consortium made up of the Federal University of Paraíba (UFPB), the Federal University of Pernambuco (UFPE), the Edumed Institute, the Center of Advanced Studies and Systems of Recife (Centro de Estudos e Sistemas Avançados do Recife - Cesar), the Rede Nacional de Ensino e Pesquisa (National Education and Research Network - RNP), The Education and Research Institute of Sírio-Libanês Hospital, and the TV Cultura of Santa Catarina, and which is coordinated by the Institute of Development and Education and the Federal University of Santa Catarina (UFSC).

The challenge of this consortium will be to create a solution with great penetration in all social levels to bring access to health services as close as possible to the population, increasing the availability of those services, as well as to use an apparatus that employs a known technology so as to stimulate its use. The digital interactive TV will also have to help health professionals, making available services that offer adequate technical-scientific content in order to keep them up-to-date.

— *In our opinion, Digital TV will permit the implementation of a great deal of innovating services in the field of health, which will increase the degree of social inclusion, promote the democratization of information, improve health services, mechanisms of social control and remote assistance, as well as foster popular and professional health education among others* – says Aldo Von Wangenheim, general coordinator of the consortium, who is optimistic about the possibility of the digital TV reaching the potential that the Internet still hasn't been able to reach.

One of the central arguments for the existence of the consortium is this question brought up by Wangenheim. According to the project, although the creation of new network-based technologies aimed at the transmission of and access to health knowledge permits the implantation of sophisticated services, systems based on centralized database and those distributed in the field of health, all this is restricted to less than 10% of the Brazilian population who has access to the Internet.

The arrival of digital TV, entering Brazilian homes by means of electric energy and television, which already reach the majority of the population, seems to be able to revert this situation and to take several of the services now available in the Internet to all this public.

The challenge will be to guarantee the dialogue with the spectator

For Cleidson Cavalcante, project manager of the consortium, the effort made by the education and research centers to produce an SBTVD reference model in the field of health will be a great opportunity to spread scientific and technological knowledge in the nation, with implications going beyond the digital television initial goals.

According to Cavalcante, the proposal is to conquer the spectator so that he can enjoy the health information that will be made available by the new TV.

— *It is no use suddenly putting health information on the screen that is different from the way the Brazilian is used to watching it on TV. In the last 54 years in Brazil, a whole language was constructed by means of a unidirectional flow of information. The great challenge of digital TV will go beyond ensuring new technologies; it will be necessary to ensure a dialogue with the spectator* – says Cavalcante.

All the network infrastructure for communication and data exchange in the project of all the institutions involved in the consortium will be in charge of RNP, which will also provide a distributed network of video servers.

WHREN/LILA

CLARA opens its direct transit to the North American Advanced Networks

Thanks to the execution of WHREN/LILA, two links of 1 Gbps and 1.2 Gbps –respectively- will be added to the ring of RedCLARA. Two connections, like supreme bridges, will be born from Sao Paulo and Tijuana, allowing not only an increase in the data transmission capacity, but the direct transit -releasing the connection to Europe- of Latin America to North America and vice versa. If we put it in aeronautical terms, from established the new connections, the information of the CLARA members will fly directly (non stop) to the United States.

María José López Pourailly

Prelude

Sunday – January 9th, under the subject of "award is official", an email of Julio Ibarra spread and celebrated the great news: the WHREN/LILA Project (of which he and John Silvester are the researchers in charge) had been approved by the National Science Foundation (NSF, United States), to be financed by means of its Program of International Networking Research, with US$5 million to be distributed in five years of execution.

Dialogue

- WHREN/LILA Project?
- Yes, WHREN/LILA
- Which means, what?
- WHREN: Western Hemisphere Research and Education Networks. LILA: Links Interconnecting Latin America.
- Then, the project aims...
- To establish a direct interconnection between the Latin American and North American Research and Education Networks.
- Represented the first ones by RedCLARA and the seconds by the Research Networks of the United States.
- Exactly!

Leitmotiv

May, 2003. The licitation process of RedCLARA backbone was in its beginnings. The conformation of the network ring was still a great project on its way to be developed, and it also was a great question: Would it be possible to carry out the plan drawn up by the ALICE Project? That was the scenario when a new aspiration began to be developed, a new dream: to interconnect the rising Latin American Advanced Network with the North American networks. To go beyond the diagram designed by the ALICE Project, generating a direct traffic interchange between Latin America and the United States and Canada, adding this capacity to the connectivity with the pan European Network –GÉANT-, and generating alternative and complementary routes of access to all the academic networks of the world. This was not only one more objective; the necessity of establishing this direct connection was perceived as crucial.

In the meantime, the conversations that CLARA developed with NSF and the Memorandum of Understanding signed in October 15th of 2003 with Internet2 (http://www.redclara.net/downloads/lista/firma_acuerdo_CLARA_Internet2.pdf), consolidated a fact that with no precedents for the Latin American region: CLARA was recognized as an organization that represents the interests of the Latin American Research Networks. So important was this that NSF declare that it was vital that Latin America, by means of CLARA, participated in the process Solicitation for International Research Connectivity, that until then was destined to partially finance interconnections between the United States and the European, Asian or Eurasian blocks. Within the framework of the International Research Networks Connectivity Programme, this call –that opens each five years-, from the sprouting and evident concretion of CLARA, will allow for the first time the participation of Latin America throughout RedCLARA connection to the North American networks and, by means of the logical transit, to the Asian networks and to others in further latitudes.

Interlude

When the new opening call was defined and made by the NSF, CLARA offered its support to the two North American Consortiums that had a project with the objective of giving connectivity to Latin America: one of them led by Indiana University, the other led by CENIC (Corporation for Education Network Initiatives in California) and FIU (Florida International University).

Declamation

The presentation of the projects of both Consortiums was made in April of 2004. Evaluations and negotiations ran, and, like in all contests, there was a winner: NSF adjudged the proposal for Latin America to the Consortium led by FIU/CENIC. LILA Project, or WHREN/LILA -name that it adopts because of being part of a strategy of several partnerships that appeared to different portions of the NSF proposal- was approved. WHREN/LILA adjudged US$5 million in a term of five years.

Central Characters

In addition to CENIC, FIU, StarLight and Internet2, the following Networks participate in the Consortium: ANSP of Sao Paulo, CUDI of Mexico, RNP of Brazil, REUNA of Chile and, obviously, CLARA.

The Piece

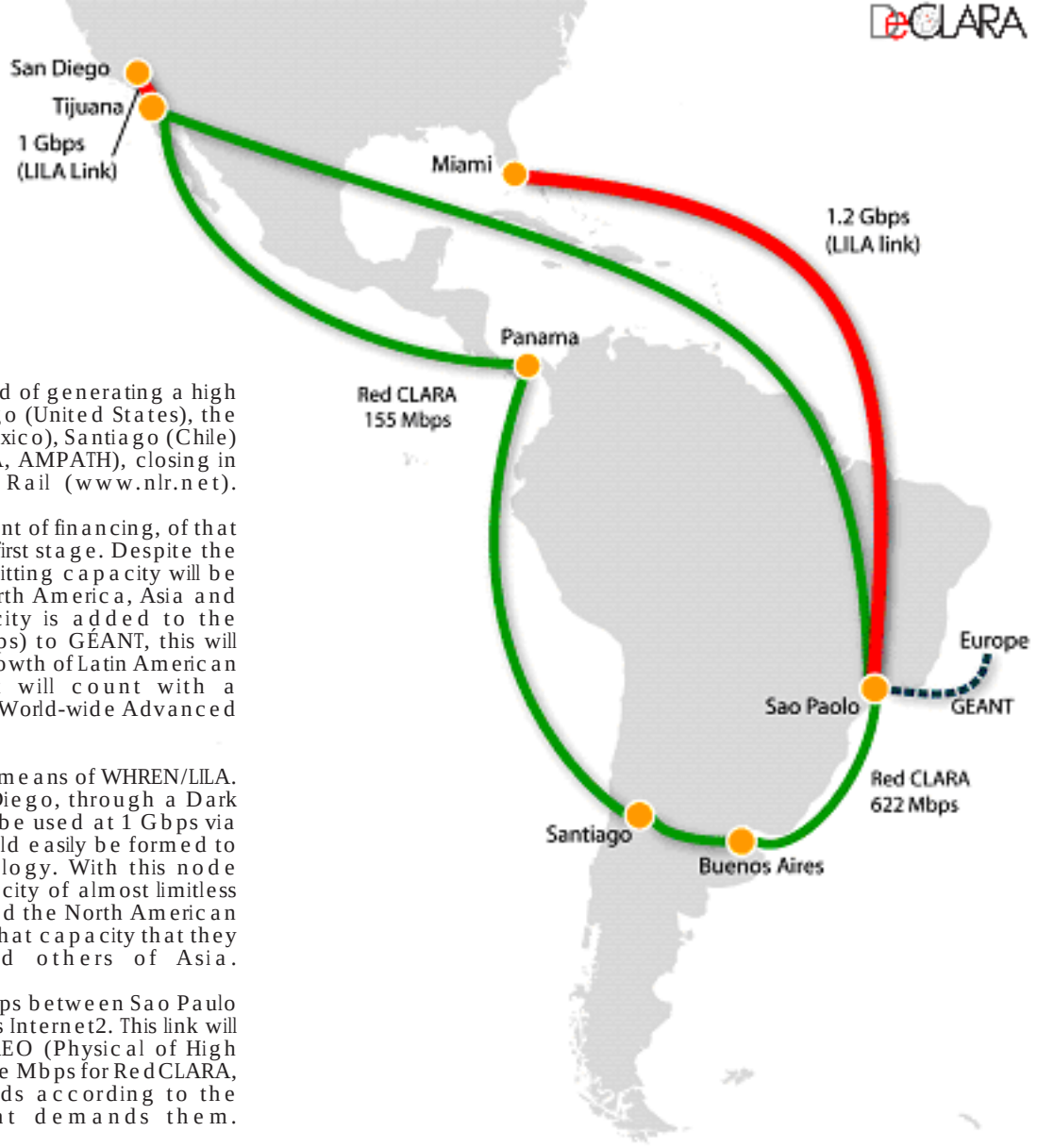
The original idea of WHREN/LILA consisted of generating a high speed ring -1 Gbps- between San Diego (United States), the Main Nodes of RedCLARA in Tijuana (Mexico), Santiago (Chile) and Sao Paulo (Brazil); and Miami (USA, AMPATH), closing in San Diego, via National Lambda Rail (www.nlr.net).

Nevertheless, given the approved amount of financing, of that original idea will be reached only one first stage. Despite the new raised scene, an enormous transmitting capacity will be generated towards the networks of North America, Asia and of other latitudes. Once this capacity is added to the connection of RedCLARA (of 622 Mbps) to GÉANT, this will become an ideal infrastructure for the growth of Latin American National Research Networks, that will count with a unprecedented traffic capacity with the World-wide Advanced Networks.

Two will be the connections installed by means of WHREN/LILA. The first it will connect Tijuana to San Diego, through a Dark Fiber (paid by 15 years) that initially will be used at 1 Gbps via optical connections. This one, later, could easily be formed to several Gbps, by using WDM technology. With this node RedCLARA and CUDI will have a capacity of almost limitless bandwidth towards CENIC, Internet2 and the North American Federal Networks, this without counting that capacity that they could reach towards APAN and others of Asia.

The second connection will be of 1.2 Gbps between Sao Paulo and Miami and from that point towards Internet2. This link will be shared with the ANSP and CHEPREO (Physical of High Energies) projects, leaving near 400 stable Mbps for RedCLARA, allowing the capacity of greater ends according to the requirements of the projects that demands them.

About the administration of these capacities, it will be into the hands of a Scientific Directive Board integrated by the member institutions of the Consortium. By the way, both connections will be installed during the present month (April, 2005).



Corollary

Florencio I. Utreras D., Executive Director of CLARA: *"WHREN/LILA is, without doubts, a step more of RedCLARA in its consolidation like the great infrastructure of Research, Development and Education of Latin America".*

Agenda

April:

ACUTA Spring Seminars
3 - 6: Philadelphia, PA, United States
http://www.acuta.org/relation/downloadfile.cfm?docnum=446

CUDI Virtual "Health" Day
5: On-line event
http://www.cudi.edu.mx/aplicaciones/dias_cudi/05_03_10/dia_cudi05_03_10.htm

Global IP Carriers
26 - 28: London, UK
http://www.carriersworld.com/2005/ip/

May:

Spring 2005 Internet2 Member Meeting
2 - 4: Arlington, VA, United States
http://events.internet2.edu/2005/spring-mm/

June:

TERENA Networking Conference 2005
6 - 9: Poznan, Poland
http://www.terena.nl/conferences/tnc2005/