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Editorial

Happy Birthday, RedCLARA!

It is just a little more than one year ago: on 17 November 2004 the first stage of the roll-out of RedCLARA came to an end when the CLARA network engineers closed the ring in the Tijuana PoP of the network. RedCLARA now interconnected the National Research and Education Networks (NRENs) of Argentina, Brazil, Chile, Mexico and Venezuela and it offered direct connectivity to the pan-European research and education network, GÉANT.

Cathrin Stöver
ALICE Project Manager,
DANTE, UK.

I believe that only when I read the flood of joyful and jubilant messages pouring into my email account on the ALICE and CLARA mailing lists did I realise what we had achieved: A dream had come true. Finally, after years and years of futile attempts, Latin America had a regional research and education backbone. It was a day for celebration.

However, neither CLARA nor DANTE allowed themselves to be complacent. RedCLARA was officially launched and while the celebration still continued, contracts were negotiated to enable those Latin American NRENs not yet connected to join the network. During 2005, the NRENs of Uruguay, Peru, Costa Rica, Panama and very recently Guatemala, El Salvador and Ecuador connected to RedCLARA, bringing the number of connected NRENs to twelve at the end of this year.

When the ALICE project was conceived, the European Commission and DANTE stated that the objective of the project should be to connect at least seven Latin American NRENs. This is more than achieved. But the ALICE project did not only create the RedCLARA network, no, it created much more. Look at CLARA itself. The organisation has proven during 2005 to be stable, reliable and effective. CLARA manages and operates the RedCLARA network and closely cooperates with DANTE in all aspects of the ALICE project management. CLARA has achieved that RedCLARA has become the supporting infrastructure for joint European and Latin American IST projects cofinanced by the European Commission. But the real success can be found on the national level and is to the immediate benefit of the student and researcher in the countries: thanks to the momentum created by ALICE, CLARA and RedCLARA, new national research and education network initiatives have been created all across Latin America. These new NRENs ensure that the digital divide within Latin America will be reduced. It is thanks to these initiatives that RedCLARA can truly be called a regional network.

And the good news continues. The European Commission has recognised the success of the ALICE project and has agreed to extend the project to 31 March 2007. This extension will give CLARA and the Latin American NRENs an extra ten months to consolidate the newly created NRENs and RedCLARA. We will have to use this time properly: From today to 31 March 2007, our efforts will have to be directed to prove to the national and international funding

bodies as much as the user communities across Latin America and Europe the necessity of regional research connectivity in Latin America and its direct connection to Europe. We have worked hard over the last four years, but 2006 will need again all our energy. The year will have to be used to ensure the financial and organisational sustainability of CLARA and RedCLARA. We will need to work with funding bodies, the user communities and the providers and suppliers to ensure that RedCLARA is not just a short-lived dream.

The reason is, of course, that there is a clear concern that future European Commission funding for Latin American research networking – if it can be obtained - will not be available on 1 April 2007 to financially support the RedCLARA network. We will have to be prepared organisationally and financially to meet the date and ensure the future existence of CLARA and RedCLARA without immediate financial support. The discussion on how we guarantee RedCLARA beyond 1 April 2007 will have to be continued and eventually settled in the first quarter of 2006.

Our strategy will have to be well defined to make an impact on the EU-LAC Summit of the Information Society which will be celebrated in Lisbon at the end of April 2006. This event and the subsequent Summit of the Heads of State between Latin America and Europe will be consequential to future funding for Latin American research connectivity by the European Commission. But obtaining financial support can only be one side of the coin. Another important element of our strategy will need to be the discussion with the providers of the RedCLARA connectivity to achieve a reduction in the connectivity costs. Only cost-based pricing will in the long term guarantee the self-sustainability of the RedCLARA network.

The European Commission Has Granted the Extension of the ALICE Project Until March of 2007

The great news for the ALICE project members, for CLARA and, of course, for Latin America, was given to them by Cathrin Stöver, ALICE Project Manager (DANTE), on Tuesday 15 (November, 2005): "I have the great pleasure to let you know that the EC has granted the extension of the ALICE project for an additional 10 months until 31 March 2007!"

María José López Pourailly

In a letter refer to the last ALICE project Technical Report, the European Commission (sent to Dai Davies, General Manager DANTE) "value the commitment of CLARA and the LA NRENs towards the ALICE project and towards RedCLARA", and consent the extension of the project until 31 March of 2007, due to the following reason:

"In relation to your application for an extension of the ALICE project to 31st March 2007 to be able to make full use of the project's budget, we have considered the following:

- on the one hand, the firm commitment towards the ALICE project expressed by CLARA and the LA NRENs confirmed by an improvement observed in the LA co-funding account since the partners' meeting held in Guatemala in July 2005 and,

- on the other hand, the need of more time than initially foreseen for CLARA to develop from an organisational and financial point of view and for the LA NRENs, specially the less developed ones, to be able to interconnect for a sufficient period of time to prove to its users the benefits brought by connectivity.

Consequently, we have decided to positively evaluate your request due to the fact that the above-mentioned points are vital for the initiative's sustainability. The procedure for the signature of the necessary contract addendum to formally approve this extension is in course".

As Florencio Utreras, CLARA Executive Director, said: "This is the great news that we were waiting in CLARA and the ALICE project". And of course it is, because this will ensure the concretion of the whole projected connections to finally achieve the goal of having the 18 Latin American ALICE members connected to RedCLARA and therefore to Europe.

"I believe that we can all be proud of this result, although we all know that it is just the beginning", points Cathrin Stöver.

RedCLARA Celebrates 1 Year of Interconnection with Europe!

The ALICE project and CLARA, the NRENs that integrates them, the human beings that gives life and sense to those networks, the projects that will be developed, all of them, celebrated the first RedCLARA network anniversary on November 22. Such important milestone, takes us to look back, to look to the present and to the future; it takes us, of course it does, to draw the line and to start to figure out some new plans and ideas. Some of the members of ALICE and CLARA spoke with us about what this year of life has been.

María José López Pourailly

What are CLARA and RedCLARA for you and what importance do you give to them in the context of your country?
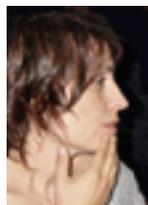
Paola Arellano – REUNA - Chile
They are possibilities of real collaboration at the Latin-American level, capacity of effective integration, throughout a platform, of those efforts that do exist in the research and collaboration people nets, and an incentive to augment the cooperation. In the context of the country, they can improve the cooperation between the institutions, the integration of the efforts and more.

Carlos Casasús – CUDI - Mexico
A speedway without cars.

Vigny Alvarado Castillo – CR2Net – Costa Rica
In the academic area, we consider the organization as a net of major importance, with a clear potential for the development, the research and the education in our country, looking for a society that gives more possibilities.

Luis R. Furlan – RAGIE - Guatemala
For Guatemala the great advantage is that after having a scientific/academic network, the "MayaNet", during the first part of the 90 decade, that because of politics affairs crumbled, now RedCLARA and CLARA have been the catalysts for the creation of a new network: RAGIE. Also, RedCLARA makes true a dream that the most of the Latin-American countries have had and which it was impossible to achieve... that is to have a regional backbone. Till now, the regional backbone was in USA.

Martha Inés Giraldo Jaramillo – RENATA - Colombia
CLARA and RedCLARA are the infrastructure and the human NET that allows us to raise up together for the better development of our advanced academic and research networks.

Joaquín Guerrero – RAAP - Peru
CLARA represents the first attempt to create a Latin-American academic network. For sure, a successful attempt, showed up not only through the conception of RedCLARA, but also trough the creation of a critic mass of researchers and technicians that are part of each one of the networks that are members of CLARA; they will be the seed for the flourish of a new stage in the scientific and technologic life for the countries of the region. The importance that we confer to them it is really big for its strongly powerful character of promoter of the collaboration between our countries and, of course, for what it means for the development of research in Peru, by means of the integration with colleagues of the region and the whole world.

Ida Holz – RAU - Uruguay
It is the accomplishment of the old dream of uniting Latin America through a network. As it was showed in the speeches of the ministers of Education and Culture of Uruguay in the launching event of RAU2, RedCLARA it has been promoted as a very important milestone of cooperation in LAC; in that sense, as the first achieved project.

Rafael (Lito) Ibarra – RAICES – El Salvador
A Latin-American effort and an achievement that can be a catalyser element, a support and a guide for the development of the scientific and the research communities of our country.

Gilberto Landaeta – REACCIUN2 – Venezuela
CLARA is a door of union with Latin America and RedCLARA is an excellent information instrument, to be aware of the most recent of what is going on in each of the Latin-American countries in what concerns to the advanced networks.

After a year of the RedCLARA launching in Rio de Janeiro, What concept do you believe that will define in the most accurate way this year of functioning?

Paola Arellano
Physical Network: it is established a "capacity or a platform" to stimulate the collaboration. There still remains the most difficult work, which is to use it for the setting up the working liaisons and to give sense to this huge effort, there are still many challenges to achieve before the consolidation of this initiative.

Carlos Casasús
We grew the speedway.

Vigny Alvarado Castillo
INTERCONNECTION.

Luis R. Furlan
For us it has been extremely difficult because, even so we were ready to establish the connection two years ago, RAGIE wasn't connected. We also lost a member because of its disappointment. It has been a year of a lot of work of generating trust in the future goals that will be achieved. The already connected countries can tell a different story.

Martha Inés Giraldo Jaramillo
Consolidation of the physic connections and of the human technical teams.

Joaquín Guerrero
In some way I did answer to this in the first question, in what is about CLARA, for my understanding the most relevant thing since its creation it has been the formation of a regional critic mass and, above all, the spirit of COLLABORATION showed by its members. Now, about RedCLARA, in particular, I think we should say that is a young network in formation, with a relatively small use and that it has to be supported the next year with many applications, as much as individual as general to our countries.

Ida Holz
Is the year of the consolidation of the project, of the installation on the network nodes, and of the advances in the relationships and in the definition of conjunct projects.

Rafael (Lito) Ibarra
A spiral of hope, frustration, hope.

Gilberto Landaeta
More integration, more collaboration.

Now that the European Commission has granted the extension of the ALICE project until March of 2007, What will you wish to happen in it and in CLARA before the fulfilment of that term?

Paola Arellano
The accomplishment of real activities of collaboration, activities that further more than involve each one of the networks, envision the work of the institutions that are part of ALICE and CLARA.

Carlos Casasús
That some cars starts to run.

Vigny Alvarado Castillo
To use the network with different applications.

Luis R. Furlan
That the subject of the academic networks become established as a key element for the scientific technological and educational development of the region… it seems difficult. It is necessary to work to reduce the network costs. Here, in Guatemala, we have that if the project ends and a critic mass of projects and the balance between use and cost it has not been achieved, we should have to be disconnected of RedCLARA. To pay the 100% of the actual it is prohibited for us. The success will be exclusively in the use that we can do of the network and in the benefits that we could take inside of our countries.

Martha Inés Giraldo Jaramillo
A lot of collaboration and a lot of research and education projects running through the network.

Joaquín Guerrero
That the network starts to be indispensable for our countries. This can only be achieved by generating new projects, function that, although is a responsibility of each one of our nations, it should be observed by CLARA as one of its central objectives, because without projects that are tangible and in process, the network will be senseless. We have to put all our efforts to be platforms for the scientific and technological development of our countries, and be totally autonomous or, what is almost the same, financially autonomous. If we cannot achieve this, because of the little time we have till March of 2007, to obtain a growth enough to guarantee that, without any doubts, in a medium term we will achieve this objectives.

Ida Holz
I will desire to have all the countries connected, that we find the financial ways to ensure the continuity of the project, and that we carry out cooperation projects between the most of us, to absolutely ensure to our academics, researchers and governments, that the project and its continuity in time, worth the effort.

Rafael (Lito) Ibarra
To successfully carry out national and regional top projects, that validate and give sense to the effort of putting the wires in its place.

Gilberto Landaeta
To consolidate the fundamental objective of the Network: to serve as the support for more projects, with products of utility for our countries. The utile traffic must grow, more and more.

Elena Vilar Pascual:

CLARA it's a Reference for Other Regions With Which the European Commission Has Similar Cooperation Programs

María José López Pourailly

Elena Pascual Vilar has been working for four years in the unit that takes care of the regional programs of cooperation with Latin America of EuropeAid, the Office of the European Cooperation. In there she takes care of the @LIS Program, to which she arrived just "when it was the time to begin the "structuring" of ALICE... that was one of my first responsibilities when I arrived here", according to what she remembers. Beyond the evident sense that it has to talk with her respect to ALICE, CLARA and RedCLARA, in regard to her position and of the specific weight of her opinions and valuations, to speak with Elena of these, is to go back at the beginning of the times in which to the history of the Latin American Network and its connection with Europe is refer; it is, also, to remember which is the true sense that this common effort has.

This conversation was developed between the cool winter of Brussels and the warmth of the summer of South of America, through the network, our network, RedCLARA.

After a year of the Latin-American interconnection with Europe by means of the ALICE Project and through RedCLARA, How do you evaluate the work that has been done and the process of development that to the date has reached the project?
We are very satisfied with the work that is being carried out within the framework of the ALICE Project and we have recently congratulated as much to DANTE, coordinator of it, as to CLARA and to its members, the research networks of Latin America, because of the results reached so far. In particular: the creation of RedCLARA, connecting at the moment 11 Latin American networks and to these with the European Network GÉANT, the constitution of CLARA as an organization that has totally appropriate of the project and that progressively is taken the responsibility of the operation and the management of the new infrastructure, the use of it by the collaborative UE-AL projects and the awareness that is being obtained in the region about the new opportunities that are opened with the work of research and education in the network.

What you would emphasize like the most important milestones of the present year in which to the development of the ALICE project it is refer?
The fact to be able to have 11 countries connected (I've just received the good news that Guatemala and El Salvador are already connected, congratulations!) including some with which frankly at the beginning we had our doubts, and the fact that this has been obtained thanks to the good negotiations with the connectivity suppliers, the determination and the effort of the national networks and their universities members and the excellent work of managers and technicians. We also value like a very positive impact the formation of new national networks in those countries where they did not exist, and to be able thus to be connected to RedCLARA, in spite of not being initially an objective of the project. Without their creation and consolidation an institutional and continued support to this new regional network could not be ensured. In addition, without the incorporation of most of the countries of Latin America we would not be reducing the digital breach but enlarging it!

How does the European Commission perceive the work that is being developed in ALICE and in CLARA?
The European Commission frames this initiative within the @LIS Program, through which an alliance between Latin America and the European Union settles down with the objective of fomenting the development of the Information Society in an inclusive way. ALICE and CLARA are perceived like instruments that can contribute to our priorities of cooperation with the Latin American region, the fortification of regional integration and the social cohesion, in this case through the reduction of the existing digital breach in Latin America and between it and Europe, approaching the possibilities of ones and others in the field of the work in network in areas for the development as important as education or health.

The extension of the project until March of 2007, at the beginning, seemed to you something complex to reach or you saw it possible? Which would you say that it was the fundamental reason so that this prorogation took place?

I have to say that there was a little moment of crisis, when stating that many of the Latin American partners had difficulties in facing their obligation to contribute to the Co-financing of the project with a 20% of the total cost. Then we considered if it had sense to prolong the duration of our contract of subvention without guarantees of having that Latin American Co-financing that for us means interest and Co-responsibility of the other part, necessary to reach the objectives and benefits of the project and to maintain it in the future. Finally the extension was granted, because of the reiteration of the firm commitment declared by CLARA and its members, which was confirmed by the improvement of the financial situation and because of the necessity of more time that the one that was initially anticipated for the connection of the less developed countries and for the strengthening of CLARA as the institution that in the future will be in charge of the interconnection.

What perception exists in Europe of CLARA as a regional organization?

Europe is always very interested in having regional networks with which to be able to collaborate in different scopes, to share or to interchange experiences, etc. In the case of CLARA, I'm sure that your European homologous already appreciate the fact of being able to count for the first time in history with an advanced research and education Latin American network, that can be use to develop innovating projects in areas of mutual interest. Also I believe that you will be a reference for other regions of the world with which the European Commission also has similar programs of cooperation, but which they still do not count on a regional network.

If you had in this precise second the power to generate any change in ALICE, CLARA or RedCLARA, which of the three you would choose and what change you would do?

In an ideal world, I would like that all the countries participating in ALICE and in CLARA could really have the same conditions of access to the new opportunities that these infrastructures offer: more democratic prices, similar capacities of connection, institutional support, etc., allowing a greater participation and in equality of conditions to many more beneficiaries. In this context, it would also make happy to see that the benefits of this network goes beyond the universities and research centers, that they also arrive to the hospitals, schools, cultural organisms, etc., the more citizens they can reach the better it would be. I know that some networks are already working in that line.

Year 2005 is ending and ALICE and CLARA are about to live their decisive moments. What advice or what words it seems to you that they should never forget from now to March of 2007?

What I believe that always has to be consider is that ALICE and CLARA are not an aim in themselves but a vehicle to reach an aim. The Latin American national networks and their communities of users are going to be the pillars that will sustain this initiative in the future with the purpose of turning it a motor of regional development through their use like instrument of international collaboration in the fields of education, science and innovation, in the benefit of the Latin American society. In this context, it also seems important to me to obtain a continued support of the competent governmental organisms of the region.

Hopeful Commitments Were Settled Down in the World Summit on the Information Society

The World Summit on the Information Society (CMSI), was celebrated on the 16, 17 and 18 of November of 2005, in Tunis. Leaders of policy sectors, commerce and the civil society, committed to reduce the "digital breach", to consolidate the society of the information by means of associations between the public and private sectors, to promote investigation networks and to elaborate a Declaration of political intentions in which the interests of all the involved parts are considered. CLARA, the Latin American Cooperation of Network, of which REUNA is a member, was represented by its Executive Director, Florencio Utreras.

María Paz Mirosevic Albornoz

According to what was informed by the International Telecommunications Union (ITU), more than 50 Government officials and Chiefs of State participated in the meeting at Tunis that was carried out in Kram PalExpo, Tunis, between the 16th and 18th of November 2005.

The Summit assessed the application of the ambitious calendar which had been decided in Geneva 2003. In Geneva 175 countries adopted a Declaration of Principles that give a common view of what the society of the information should look like, it also states an Action Plan in which objectives pay attention to improve the connectivity and the access to the TIC. Future objectives, that aim to be reached before 2015, consist, in connecting villages, communitarian joining points, schools and universities, sanitary research centres, libraries, centres and hospitals, as well as the central and local administrations among other things.

Governments reached agreements on issues like the effective financial strategies necessary to promote the installation of the TIC in developing countries.

Besides the commitment to facilitate access to Internet and other technologies of the information and the communication to developing countries, the Program of Actions of Tunisia for the Society of the Information, reaffirmed the commitment to facilitate an equitable access to the information and knowledge to all, in recognition of the function of the TIC for the economic growth and development. Within this, it committed to promote the creation of Networks of Investigation, at national, regional and international scales, with a view to improving the collaboration in scientific, technological and superior education.

According to the Executive Director of CLARA, Florencio Utreras, this last commitment "is a great triumph for CLARA... We must deeply thank the government of Chile, that through its representatives proposed and obtained the approval of this commitment"

Enter the site of the Summit:
http://www.itu.int/wsis/index.html

RedCLARA NEG TREK

Eriko is Also Culture

María José López Pourailly

We discovered that the serious Captain Eriko Porto it is not just the master and commander of the NEG airship. To be truth, Captain Porto, Eriko is also culture, philosophy and, furthermore, a human being.

Once again, we stole his diary, and now we've got the new reports of the voyages of the CLARA Network Engineering Group - NEG, and of his own and personal thoughts. Please, don't let him know anything about this.

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 have been taken from captains Eriko Porto diary.

Wednesday 26, October. Logroño, Spain

With the aim of make bigger the proximity between the different academic networks and of guarantee a much more intense cooperation between the members of the ALICE Project, I have invited everybody to participate today in the first "ALICE Challenge", here in Logroño, Spain. The idea is to follow one of the most important Spanish traditions, which I think is to go to different "cultural places" for "tapas" and "copas". I want this tour to be complemented and enriched with profound philosophic discussions.

As the master and commander of the NEG airship, and because of my knowledge of the human condition –Eriko is also a human-, I know that this event is going to be fundamental for the integration between Spain and Latin America, therefore I have said that the participation is obligatory. I will fight for the publishing of the results of this challenge on CLARA's website.

Monday 28, November. Montevideo, Uruguay

I'm in Montevideo participating in the second annual meeting of the ALICE Project and CLARA. Because of the success of the first "ALICE Challenge", in terms of cooperation, I decided to establish contact with other earthlings, CLARA and ALICE members actually. Tonight I went out with group of people, I was totally concentrated in their conversation, philosophic and theoretical subjects… One of those people looked me right between the eyes and ask me what I was thinking of and these words came to my mind: Eriko is also culture.

Am I loosing the focus?

The NEG is working well. We will promptly establish contact with Guatemala and El Salvador.

Friday 16, December. NEG airship

This week we have managed to install the transport network in Central America that will serve as the basis for the connections between several NRENs from the region and RedCLARA.

We are now peering with the NRENs from Guatemala (RAGIE) and El Salvador (RAICES). Although the universities are now in their period of vacations, with the aid of the engineers from RAGIE and RAICES we were able to establish the BGP sessions from RedCLARA to their central routers, and we are now capable to exchange traffic with these two countries.

RAICES is connected using one of the Cisco 7200 routers that CLARA provided for the connection of some NRENs. RAGIE is using a provisional Linux-Box as their main router to peer with RedCLARA, while waiting for another Cisco

7200 router to be cleared from Customs, which comprises an interesting scenario to evaluate the behavior of this configuration and the performance of the Linux in this case study (anyone who wants to know more about it, should contact RAGIE... I should pass this message).

We will need now to prepare the migration from the provisional connection from Costa Rica via CUDI to a direct peer with RedCLARA, passing through the new equipment installed in Tijuana, and also complete the transport network for the connection of RENIA - NREN from Nicaragua.

We also managed to complete the installation of the optical multiplexers in the link between Tijuana and San Diego, and now we have independent 1Gig optical channels in this link for RedCLARA and CUDI to peer with the USA networks.

All these improvements were achieved with the strong support from the CLARA-NOC and the hard work from Hans Reyes, who has been working on-site during all the time required for the implementation of these services.

It is very good to end the year with a total of 11 countries connected, peering with major international networks, and a solid backbone infrastructure well managed and operated. Everybody knows that it has been a hard year for us all, and all the achievements that we've made are direct consequence of the hard work and strong commitment from the members of the project. That's why, if I had the chance, I would like to wish to all the CLARA members a nice holiday with their families and loved ones, and a new year where we would be able to accomplish even more than we already did... I would really like to have that chance, but who knows, maybe one day this diary is going to be found and my wishes will then be known.

January Will Be the Month of Launching Events in Latin America

RENATA and REACCIUN2. Colombia and Venezuela. Two networks, two countries, two launching events of the most importance for the CLARA community.

During the last week of January, while the Summer hits with its heat the South of America, the Colombian RENATA –National Academic Network of Advanced Technology- and the Venezuelan REACCIUN2 –Academic High Speed Network of Research Centres and National Universities- will be preparing their long dresses to celebrate their official launching events.

María José López Pourailly

Colombia

January 24 is the date chosen by Colombia for the official launching of RENATA, network that counts on the support of the Connectivity Agenda and of the Colombian Ministry of Education. The followin authorities will participate in the event: Martha Elena Pinto de De Hart, minister of Communications, Cecilia María Vélez White, minister of Education, María del Rosario Esguerra, director of COLCIENCIAS, Silvia Falla Robles, European Comission representative, Florencio Utreras, executive directorof CLARA, and the executive director of the Brazilian advanced network, RNP, Nelson Simões. The closing ceremony will be in charge of the Connectuvity Agenda director, Gustavo Adolfo Gómez Uribe.

As a project, RENATA is consider by the Connectivity Agenda as the fundamental part of the line dedicated to Knowledge Management.

RENATA interconnects six regional networks (and through them, 50 institutions): RUMBO (Bogotá), RUMBA (Barranquilla), UNIRED (Bucaramanga), RUAV (Cali), RUANA (Medellín) y RUP (Popayán).

Venezuela

REACCIUN2 will take three entire days to celebrate its great occasion, a Seminar that will be carried out through the 23, 24 and 25 of January in the Tamanaco Intercontinental Hotel of Caracas. The 23 will be devoted to the official launch of the Network, in which will participate some representatives of the Ministry of Science and Technology and of the Ministry of Superior Education of Venezuela, and of the eleven universities and research institutes that are part of the first phase of REACCIUN2; they are: University of Los Andes (ULA), Central University of Venezuela (UCV), Venezuelan Institute of Scientific Research (IVIC), University of Carabobo (UC), Central Occidental Lisandro Alvarado University (UCLA), University of East (UDO), Simon Bolivar University (USB), Experimental Pedagogical University Libertador (UPEL), University of the Zulia (LUZ), Bolivarian University of Venezuela (UBV), National Experimental University of the Army (UNEFA).

These institutions will be connected in a "star" structure, to the National Centre of Information Technologies (CNTI). Nine of them with links of 34 Mbps and two, with links of 8 Mbps, to an ATM cloud; at the exit of the cloud there will be two links of 155 Mbps to CNTI. The international connection it will be carried out through the Sao Paulo (Brazil) node of RedCLARA.

During the first day of the Seminar it will be presented the state of the art of many of the most important advanced networks. During the second and third day, ther will be presentations and videoconferences in relevant areas such us E-Health, E-Education, Grids, Digital Libraries, Arts and Telecommunication Networks.

The last evening it will be dedicated to five working groups which will present their conclusions by the end of the day.

In a second phase, to be developed during 2006, REACCIUN2 will interconnect the rest of the public universities of Venezuela.

The Connection of Uruguay to RedCLARA is Now Official

From now on Uruguay officially integrates the RedCLARA network, through their new Uruguayan advanced network RAU2.

Marcus Vinicius Mannarino, RNP.

On Tuesday 29th of November, the Uruguayan network RAU2 and its connection to the RedCLARA network was officially launched in Montevideo (capital of Uruguay). Representatives of diverse academic networks that were in Uruguay for the 5th Meeting of the ALICE Project and for the General Meeting of CLARA had the privilege of assisting to the launching event of RAU2.

RAU is part of the University of the Republic, it is administered by SeCIU, and it operates since year 1988. RAU offers its service to 31 Faculties, Institutes and Schools, 6,516 academics, 1,065 technicians, and 60,000 students.

The minister of the Education and Culture of Uruguay, Jorge Brovetto participated of the launching, as did the ambassador in Uruguay of the Delegation of the European Commission, William Hanna and the president of CLARA, Nelson Simões as well as the Financial Director of DANTE, Mathew Scott. The president of the Spanish section of the Internet Society, Víctor Castelo, also took part in the launch, through a videoconference link. After the launching of the network, the auditorium of about 150 people attended a series of 5 demonstrations of use of the net.

William Hanna highlighted the mutual interest of the scientific communities of Europe and Latin America in the development of research in diverse areas, such as telemedicine and the forecast of disasters. He mentioned the support of the European Commission for magnifying of the regional network in the LA. He highlighted that beyond the technology development, the initiative also generates economic benefits and therefore gives sustentation to regional development.

Nelson Simões remembered the difficulties faced in the region to materialize the dream of interconnecting research institutions, the scarcity of adequate services of telecommunications and how the lack of financing had postponed the project for around 12 years. The support of the European Community, in special, the persistence of countries as Spain, France, Italy and Portugal, were critical in reversing this trend adding to the capacity of organization and mobilization of research communities in Latin America and the Caribbean.

The RedCLARA network was launched in November of 2004. In 2005 the backbone has 11 countries interconnected and it is planned the connection of nine more in 2006. "The RedCLARA network is the materialization of the regional conscience of that it will not be development without networks", Simões declared.

Víctor Castelo put emphasis on the evident differences in the degrees of development of national academic networks between diverse countries of the region. He highlighted the importance of the creation and consolidation of CLARA as a propeller force for a higher level of official commitment with research in countries with bigger difficulties.

Before the morning finished, five projects were presented as demonstrations of the potential of use of the RAU2 network. In all of them Uruguayan researchers spoke of the important partnerships with researchers of other countries, in Latin America, Europe and Japan. The presentations were previously recorded in videos in which the projects were summarized and included images of experiments using the network in real time.

Luis Mussio, chief of Scientific Metrology of the Technological Laboratory of Uruguay presented and experiment of voltage calibration, current and power, executed in collaboration with the National Metrology Centre of Mexico. Luis Mussio said that RAU2 will strongly support the work on his area, which is based in the comparison of national and international measurement patterns, in the mutual recognition of those patterns in the human resources formation.

Gonzalo Tancredi presented the robotic telescopes, which can be remotely operated. The astronomers that has access to that system do not need to be allocated in the same place were the telescopes are placed, normally in remote and uninhabited regions, close to the poles, to avoid the luminous and atmospheric pollution. Through a web interface, they can establish the coordinates of the celestial objects that they want to observe, so the telescope gets its position in accordance to the information of allocation given by the system, then, the astronomers can easily develop their work. Tancredi refer to a set of educational telescopes that are placed all around the world, which application will be benefited through the remote operation via advanced networks. For example, he said, if these technologies and the networks are well combined, during the scholar period students could have access to the remote equipment, to do nighttime observations with equipment placed in Australia.

Angel Caputi presented a project that is developing in collaboration with a French institution of processing and interpretation via web, of biological electric images. His study intends to identify the patterns of the images of the electric impulses that a kind of fish utilizes to identify its food.

Fabian Capdevielle spoke about genetic manipulation for the improvement of rice, a project that counts on the participation of Brazilian researchers from Embrapa.

Luis Ruso showed, with enthusiasm, how the network is supporting the medicine field, in areas of assistance, teaching, research and in all the clinical process phases. The advanced networks, with great capacity of data transference, together with specific systems, allow the traffic of high quality images, permitting the distribution of all the elements of a clinical evaluation, with the same quality of the original image.

The event finished with the presentation of the teachers Eduardo Fernandez, in Montevideo, and Shin-Ichi Fukuda, in Tokyo. They presented the duet for guitar, of Fernando Sun, Souvenir of Russia, Oppus 63. The piece, of about 10 minutes of duration, was applauded enthusiastically by the auditorium.

Check out the videos of the launching event and of the demonstrations, at RAU's Web site:
http://www.rau.edu.uy/redavanzada/inauguracion/

Guatemala & El Salvador
Brother Countries Celebrates Their Connection to RedCLARA
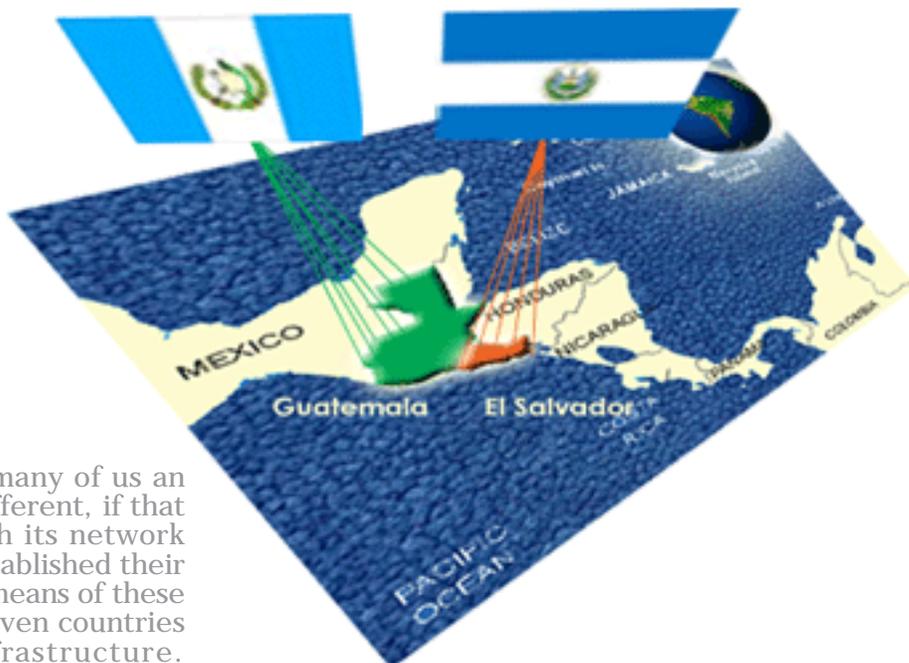
The 14 of December of 2005 will be for many of us an unforgettable date. And how could it be different, if that was the day in which Guatemala, through its network RAGIE, and El Salvador, through RAICES, established their direct connection with RedCLARA that, by means of these new connections, that same day added eleven countries of Latin America to its powerful infrastructure.

The following is the story of this remarkable history that, obviously, it was written through the network.

Dear friends,
Just a few words to inform you that RAGIE is already connected to RedCLARA. We have some little problems of configuration but the difficult part is done. Coincidently, the first connection of Guatemala to Internet was done in December of 1995, exactly 10 years ago! What is the progress ; -)

Thank you very much to all those who did the things that appeared to be impossible to obtain this landmark. I know that there have been sleeplessness, angers, etc. Now we must see the future and give a good use to this new tool.

Greetings,
Luis R. Furlan
RAGIE

CONGRATULATIONS!!!!!! Luis, not only because of the connection but for the patience and the constancy. Greetings,
Martha I.Giraldo Jaramillo – RENATA – Colombia.

CONGRATULATIONS LUIS! And to all those that against all odds have been managing to overcome the multiple difficulties! Good news to level up! At least in what is about the tools to construct the potentiality of the equality of opportunities. A hug,
Carlos F. Frank – RETINA – Argentina.

Luis, Congratulations! Finally! Thank you very much to all those that with patience and consistency have made it possible! A hug,
Cathrin Stover – ALICE – España.

Great joy to be together again, like in our dream. A great hug, many congratulations to all,
Ida Holz – RAU – Uruguay.

Hello to @ll:
CLARA can add a new fact without precedents to its list, far from negligible: it has connected two more countries to RedCLARA during the same day: today 14 of December of 2005.

From this day El Salvador is connected, although we have to finish the distribution of the connectivity. The important fact is that we are adding networks to that yearned backbone. Also, El Salvador, this month of December of 2005, celebrates its ten years of direct connection to Internet.

Congratulations to @ll the creators, thank you very much, and let's go ahead.

Greetings
Rafael (Lito) Ibarra
RAICES

Lito, great, I am so happy that El Salvador is also connected! We should proclaim the 14 December as "The CLARA Day", the day when the biggest hurdles (so far) was finally taken! A strong hug,
Cathrin Stover – ALICE - España

Many congratulations, Lito, because of your country and because little by little we are consolidating CLARA, what fortifies us for "the upcoming". Hugs,
Martha I.Giraldo Jaramillo – RENATA – Colombia

Again, a great joy because of the advance and the draw near. A great hug,
Ida Holz – RAU – Uruguay.

A great hug, LITO, congratulations to @ll.
Carlos Frank – RETINA – Argentina.

Dear friends, Lito and Luis, I wish that your member universities start now to enjoy the communication and collaboration that RAICES and RAGIE managed to make specific with RedCLARA. Congratulations to you by the dedication to reach this landmark for Guatemala and El Salvador. A Hug,
Nelson Simões – RNP – Brazil

Hello Luis and Lito,
This is a great news. From now and on, count with all the support of REUNA for those actions or activities of collaboration in which Chile can be a counterpart. A great hug,
Paola Arellano – REUNA - Chile

Congratulations, El Salvador and Guatemala! Perseverance, effort, what a year ending! A great hug,
Luis Castillo – RAU - Uruguay

It is important that we all know of the joy that we felt when we see that our network grows and our friends obtain their objectives. One of the values that have been developed with CLARA is the one of integration. Congratulations to Luis and Lito, to all the people of RAGIE and RAICES, it was a very hard work but as we already can see, had its compensation. A hug.
Joaquín Guerrero – RAAP – Peru.

Brazil:
RNP & the Ministry of Science and Technology Launches a New Multigigabit Academic Network

With the virtual participation of three states, the show delighted the people who attend to the 3^d National Conference of Science, Technology and Innovation (CNCTI).

Julia Dultra and Eduardo Carvalho, RNP

The minister of Science and Technology, Sérgio Rezende, launched, in November 17 of 2005, the new multigigabit academic network infrastructure that RNP –Brazilian National Research and Education Network- operates. According to the minister Rezende, the President Lula Government is investing 40 millions of Reais (Brazilian currency) in the implantation of the new connections of the national backbone and in the creation of 27 metropolitan optical networks, that will integrate this backbone.

The new network was launched during the 3^d National Conference of Science, Technology and Innovation (CNCTI), in Brasilia. Promoted by the Ministry of Science and Technology (MCT), the event gathered a public estimated in more than 2.000 people, during the 16, 17 and 18 of November of 2005. Around 250 people assisted to the network launching ceremony, that also counted with the participation of the minister of Education, Fernando Haddad, the general secretary of the 3^d CNCTI, Carlos Aragão, and of the general director of RNP, Nelson Simões. The minister of Culture, Gilberto Gil, recorded a message about RNP, that was exhibited during the ceremony.

A new cycle

Nelson Simões gave a short speech about the history of RNP, since its birth, in 1989, as a CNPq project, till the present, going through the creation of the Interministerial Programme MEC/MCT of Implantation and Maintenance of the National Education and Research Natework, in 1999. The general director of RNP said that in this year a new cycle is starting, with the launching of the optical multigigabit network and the renovation of the Interministerial Programme. In technological terms, the new infrastructure represents a change of paradigm for the academic networks. In operational terms, the new phase of the Interministerial Programme inaugurates a series of new objectives and indicators that should better reflect the actual reality and to attend to the necessities of the research and education communities with more efficiency.

The minister of Education, Fernando Haddad, said that the agreement signed with the MCT for the maintenance of RNP, is an example of successful collaboration between the two ministries. The minister Gilberto Gil, that has his first contact with RNP in 2005, because of the cycles of conferences titled "The silence of the intellectuals", congratulated RNP for the launching of the new infrastructure, remembering that "the networks are vital to develop the contents", and they help to "democratize the access to the cultural content".

Enclosing the speeches, the minister Rezende informed that the new RNP network is integrated to a broader initiative of the MCT, called Knowledge Network. This initiative it envisions not only the extension of the physical capacity of the national network and the formation of metropolitan networks, but also the generation and integration of content and the enlargement of the national system of high performance informatics. In words of Rezende, the new network "it is also part of a huge project of digital inclusion of the Brazilian society".

redeIpê

Dance and music demonstrate the network capacity

After the speeches, it was presented the "Versus" show: an artistic telematic performance, created by the Contemporary Dance Group of the Dance School of the University Federal de Bahía, and directed by the ballerina Ivani Santana. This performance joint together and let interact in real time, the dancers that were at the scenario located in Brasilia with dancers that were in Salvador de Bahía. All of them dancing with the music of João Pessoa, that was played from Paraíba.

This show was possible because of the transmission of high definition images (HDTV) between the three locations, which did also allow to demonstrate the huge capacity of the network. The final result, this is the show that was presented in Brasilia, was recorded and transmitted alive by Internet through the RNP network.

Ivani Santana, who's also researcher in dance mediated by technology, through the performance did a metaphor of the condition of the human relations in a world in constant mutation. According to her, the important it is not the point of arrival or departure, but the road, that which is in constant transition.

The music was in charge of the French composer and instrumentalist Didier Guingue, doctor in music and musicology of the XX century and professor of the University Federal of Paraíba (UFPB). He directed the Log3 group in the execution of the pieces, played in laptops starting from four different musical schemes. The sound and the images of the musicians of Log3 (Guingue, Marcílio Onofre y Ticiano Rocha) were transmitted simultaneously to Brasilia and Salvador, were the dancers were.

The catching and transmission of the images between the three points, was carried out by the team of professor Guido Lemos, responsible of the RNP Digital TV Working Group and of the Applications of Digital Video Laboratory of the UFPB (Lavid). Between Brasilia and Salvador, there were used HDTV cameras for the generation of high definition images.

About Ipê network

Ipê network was projected to meet the technical requisites of advanced applications. Its infrastructure ensures the necessary bandwidth for Internet production traffic, for the use of advanced applications and services, and for experimentation. Its characteristics, both in terms of band capacity and employment of technology, are equivalent to those of the main academic networks in operation nowadays, and they put the country in a privileged position in the international scene.

In October 2005, the gigabit links were installed in ten points of presence of the network. Higher federal institutions, federal research units and agencies from the Ministry of Science and Technology and the Ministry of Education - besides other public and private education and research institutions in the Northeast, the South, the Southeast and the Midwest of Brazil - will directly benefit from it. In Rio Grande do Sul, Santa Catarina, Paraná, Bahia, Pernambuco and Ceará, the interstate capacity is of 2.5 Gbps. São Paulo, Rio de Janeiro, Minas Gerais and Distrito Federal are interconnected by 10 Gbps links.Thus, the aggregated traffic capacity of all the backbone (the sum of the capacities of all the links) reaches around 60.5 Gbps. Ipê network has two international connections of its own, each one having 155 Mbps. One of them is used for Internet production traffic. The other is connected to the CLARA Network -RedCLARA- (Latin American Cooperation on Advanced Networks). Furthermore, Ipê network has more than 1 Gbps of traffic exchange capacity with other public and private commercial networks.

The aim is to expand the multigigabit capacity to all the points of presence by 2007.

Why Ipê?

RNP decided to use a national symbol to represent the new network: the flower of the Ipê. The logo of the network suggests a picture of the flower with three petals, representing a tripod of fundamental ideas for the progress of the country: innovation, research and education. The Ipê is a tree known for the beauty of its flowers and for the strength of its trunk. Similarly, it is expected that the infrastructure of the Brazilian network (the trunk) will be strong enough to ensure to the institutions using RNP's backbone (the branches) whatever is necessary for the development of science and education (the fruits), in an innovating way.

Topology Map
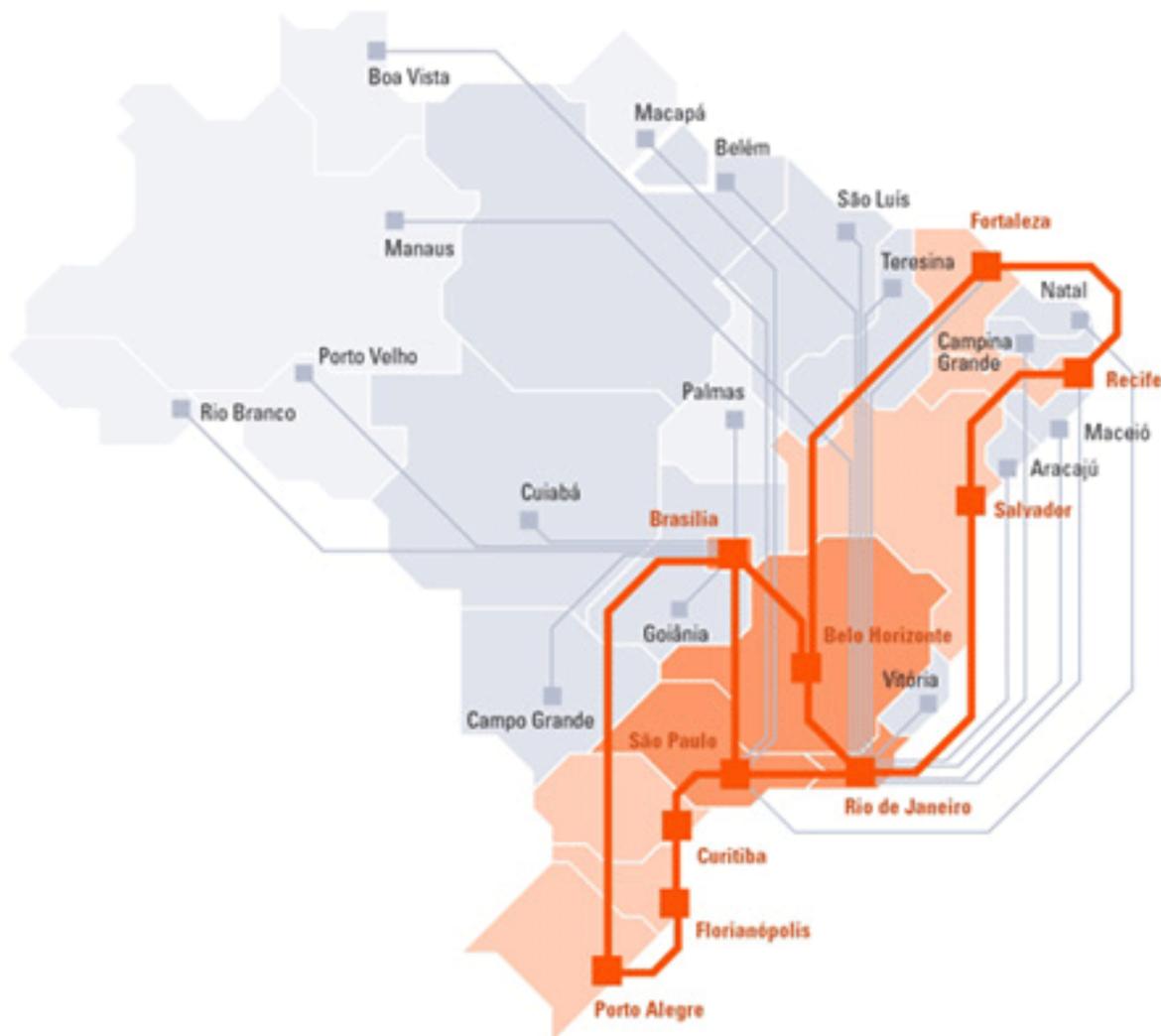
ARENA
The Promise of a Great Compendium of R&E Networks Information

The support for the ARENA project –led by Internet2- is provided by the National Science Foundation (NSF) and the University Corporation for Advanced Internet Development (UCAID).

María José López Pourailly

ARENA, the Advanced Research and Education Network Atlas, is the name of the project that is currently developing Internet2, to create "a compendium of information about advanced research and education (R&E) networks around the world".

The Atlas database –that because of the projects aims is going to be always under a development process- includes links to various types of network maps, administrative, technical and operational contacts for the networks, and information about connections between them, providing several tools with which to explore this information and the relationships between the different networks.

ARENA aims "to facilitate the engineering and use of advanced networks by the research and education community".

Due to the importance of the project, the following information was totally taken from the "Overview of ARENA" web page, which is the project description from the NSF proposal. For more information about the project description, please go to: http://arena.internet2.edu/html/nsf_proj_desc.html.

ARENA uses

The ARENA would serve both academic researchers and network engineers. Researchers could use the ARENA to determine if there is a high performance path available between their institution and the institutions of researchers they are collaborating with. They will also be able to determine the bandwidth and capabilities of that path, which will give them an idea of the possible network performance available. The ARENA might inspire collaboration between researchers, which would otherwise not have been attempted.

Network engineers could use the ARENA to optimize the design of their own network's backbones. Its availability should serve as a catalyst in accelerating the rate at which connections across multiple networks are optimized and expensive redundant connectivity to individual institutions is removed. The ARENA could also be used as a source for engineering design ideas. Engineers designing backbones or gigaPoPs could use the ARENA as a source of examples of other engineer's designs. Having network design data available would encourage contact and collaboration between network engineering teams.

ARENA Network Map Descriptions

Several types of maps would be included in the ARENA. Each entry would consist of a description of the network, its policy and technical contacts, the phone number and email address of its NOC, and a pointer to the network's home page on the web. Maps that would appear for each network would include:

· Logical Maps: showing the networks backbone topology and the institutions it serves

· Backbone Maps: showing the networks backbone from a "hardware" point of view at both layer 3 (IP Routers) and Layer 2 (ATM switches, if applicable)

· Multicast Maps (e.g. MSDP and MBGP) if the network supports multicast

· IPv6 Maps if the network supports IPv6

ARENA Networks

Networks that would be included in the ARENA will include, but are not limited to, the following:

· US Research and Education Networks: Abilene; DREN; ESnet; NREN; NISN; vBNS; US R&E Network Peering Points

· US GigaPoPs: CalREN2 North; CalREN2 South; Florida; Texas; MAX; MREN/STAR TAP; Northern Lights; NYSERNET; PNW; SOX

· National Research Networks (outside of the US): APAN; CA*Net II; CERN; DFN; GARR-B; IUCC; NORDUnet; MirNET; Super JANET; SURFnet; SREN; RENATER2; SingAREN; SURFnet; TANnet; TEN-155

ARENA web site: http://arena.internet2.edu/

Grid Technology:
The Revolution That Will Try to Change Our Lives

Its called "Computation P2P", "Grid Computing" or "Distributed Computation" and proponents say that it will even try to change the way we live our lives. It unites and it shares, its designed mainly to work in groups but in independent form. Several computers, connected like in a Mesh (Grid), make calculations for a concrete project, once these results are obtained they are sent to a central computer that stores them.

María Paz Mirosevic A.

The technologies of Grid are revolutionizing the countries and the industries that have taken advantage of their benefits, resulting in savings of direct costs and in immediate economic impact, an increasing productivity, and incoming investments of new companies that use it.

The opinion of the experts, in the long term, on using the Grid technology is that, like several other previous revolutionary progresses, it will impregnate all the computational aspects of the future, giving by result trains, governments, and academic institutions that participate in the construction and the use of Grids.

The beneficiaries include influential companies in the industry of the computation, those dedicated to create hardware, middleware, software, and to settle down networks. Also there are other industries that already are considering it by the financial advantages in areas like: aerospace, automotive, human management of telecommunications, pharmacist, resources, homemade products, games and others.

Hopeful Expeditions

A hopeful exhibition which works in developing Grids and showing them around the world (GRIDtoday www.gridtoday.com) wishes to shape peoples interests through sharing the possible benefits. Thus they constantly make demonstrations with the last progresses of this technology.

A few days ago TeraGrid (http://www.deisa.org/) and Deisa (http://www.teragrid.org/), the European computational Infrastructure Grid, was united to make a technological demonstration on systems of global files of wide area that cross two continents.

In the exhibition, access to TeraGrid – it was showed that any scientist, participating in the United States -, or having access to DEISA - from one of its sites in France, Germany or Italy -, to the stored data of collaboration in the systems of global Grid files can directly create or have, connected, of TeraGrid and DEISA, with a space of direction and a common file. The most important aspect for the uses executed from anyone of these sites is that the data will be available in a common file.

For the demonstration, DEISA and TeraGrid were interconnected with the aid of specialists of GÉANT, Abilene/Internet2, and the national networks of investigation of France, Germany, and Italy (RENATER, DFN and GARR, respectively). Thus a network of high performance that crossed both continents was formed; a network between the sites of TeraGrid in the San Diego Supercomputing Centre, Chicago, and Indiana, and the sites of DEISA in several European countries (France, Germany, Italy). On this connection, the systems of global files of DEISA and TeraGrid were combined in a common system of global files.

After one of the possible applications of Grid technology was demonstrated one hopes that this networking, between two infrastructures, can be more common in the future.

Global Grid Forum

Nobody doubts that the Grid is a subject that is being opened to the world and that its popularity and experience of uses of this technology increases. Institutions that are making events to reunite them exist; this is the case of GGF (Global Grid Forum www.ggf.org).

The Global Forum Grid, institution formed by a community of users, creators and leaders, organize a world meeting with the Grid community, in the last meeting, progresses, developments, ideas and practices of the Computation of Grids were shared.

The Global Forum Grid (GGF) is formed by a community of users, creators and leaders who develop the Distributed Computation. They are thousands of individuals that work in industry and investigation, they represent more than 400 organizations in more than 50 countries. Together they work so that the Computation of Grids through the world is adopted, since they are convinced that this one will lead new discoveries, new opportunities and better practices of businesses.

The next Forum, that takes by name GGF16, will take place in Greece, Athens, between the 13th and 16th of February of 2006. In it factories will be made, to char them of experts, technical positions of a guardian and demonstrations on the basis of the implementations of the Grid in software.

UCHRI Launches Cyberinfrastructure for Humanities, Arts and Social Sciences

The University of California Research Institute (UCHRI) announced during October the launch of the HASS Grid, a major cyberinfrastructure initiative to strengthen research support for the humanities, arts and social sciences.

María Paz Mirosevic A.

The HASS Grid will provide a home for digitized artifacts including 3-D, audio, video and text collections vital to research in the HASS communities. Dr. David Theo Goldberg, director of UCHRI, explains: "The HASS Grid provides a base platform for integrating the full range of multimedia cyber-tools in support of accessing and analyzing large databases across he humanities, arts and social sciences. It will prove crucial for future work in cultural representation, the understanding of material culture, their historical conditions and social implications. But it will also offer opportunities to a broader range of intellectual communities to revisit older interests such as the analysis of medieval manuscripts."

In July 2005 UCHRI began the construction and deployment of cyberbricks. These bricks or storage computers enable access to aggregated, integrated, data-storage systems. Through this system, UCHRI will provide a low-cost, scalable, long-term archive for HASS data collections. UCHRI intends to bring 25 terabytes of storage space online by January 2006.

Initially the HASS Grid will be a test-bed for HASS researchers throughout the University of California. Starting in spring 2006, the system will be released to a wider audience. UCHRI is working with the Center for Information Technology Research in he interest of Society (CITRIS) at UC Berkeley and the San Diego Supercomputer Center (SDSC) at UC San Diego to create the systems for storing, accessing, analyzing, and manipulating the data collections crucial to HASS research. Together UCHRI, CITRIS and SDSC are building an interface between the CITRIS Digital Gallery Builder, a 3-D virtual world space for presenting and collaborating on digital collections, and SDSC's Storage Resource Broker, a client-server middleware designed to manage file collections in heterogeneous, distributed environments.

The term "cyberinfrastructure", coined by a National Science Foundation blue-ribbon committee, describes new research environments in which advanced computational, collaborative, data acquisition and management services are available to researchers through high-performance networks. To date, the great majority of these new integrated computing environments have been targeted at the sciences.

Grid technology is coordinated resource sharing and problem solving in multi-institutional virtual organizations. Data and computational grids consist of advanced computer technology for sharing resources more effectively. They are part of cutting-edge cyberinfrastructure development that is paving the way for the next generation of information and communications technology and management tools by combining individual desk-top computers into a seamless networks.

The University of California Humanities Research Institute (UCHRI) is a multicampus research unit of the UC Office of the President. UCHRI is based on the UC Irvine campus and serves all ten campuses in the UC system. Recognized nationally and internationally, the Institute promotes collaborative work by teams of researchers representing different fields and institutions both within and beyond the University of California.

For more information: http://www.uchri.org

Agenda

January

16 – 21: III International Congress "Learning with Technologies"
Puerto Vallarta, Mexico
http://www.cuc.udg.mx/capte/

18 – 20: Quilt 4th Optical Workshop
Fort Lauderdale, Florida (Estados Unidos)
http://www.thequilt.net

23 – 25: Seminar and Oficial Launch Event of REACCIUN2
Caracas, Venezuela
http://www.reacciun2.edu.ve

24: RENATA Oficial Launch Event
Colombia
http://www.agenda.gov.co/

30 January – 1 February: Performance and Master Class Production
United States
http://events.internet2.edu/2006/NWS/index2006.html

February

2 – 3: PFLDnet 2006
Nara, Japan
http://www.hpcc.jp/pfldnet2006/

13 – 16: 16th Global Grid Forum
Athens, Greece
http://www.ggf.org/GGF16/ggf_events_regstrtn_ggf16.htm

March

20 – 24: 17th International Conference Society for Information Technology & Teacher Education
Orlando, Florida (USA)
http://site.aace.org/conf/