FINAL TECHNICAL REPORT

America Latina InterConectada con Europa (ALICE)

ALA/2003/061-696

Leader of the consortium
DANTE

Period:
03 June 2003 to 02 April 2008

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1. Executive Summary

The ALICE (America Latina InterConectada con Europa) project was executed between 03 June 2003 and 02 April 2008. The project was based on experience that DANTE had in organising pan-European research networks in Europe, as well as similar initiatives which DANTE led in the Mediterranean region (EUMEDCONNECT). The project was split into two distinct phases: Phase A, the planning and procurement phase, lasted for eight months from June 2003 to the end of January 2004. Phase B, started with an implementation phase and lasted for the remaining 50 months until 02 April 2008.

Phase A: Planning and procurement

When the project started in 2003, some of the Latin American countries had well organised and well developed NRENs (National Research and Education Networks). Others were less advanced in terms of their operational capabilities. In many Latin American countries an NREN did not yet exist and, in these cases, it was necessary to find appropriate organisations as an inter-locutor. An important initial activity was, therefore, to establish contact with the Latin American NRENs and NREN initiatives and to build dialogue so that they would have a good understanding of the objectives of the ALICE activity, as well as the potential benefits which they could derive. This work was based partly on the earlier activities of the CAESAR (Connecting All European and South American Researchers) project. An important result of CAESAR was that, following the meeting in Toledo in June 2002, the Latin American NRENs began to organise themselves as a group in the CLARA (Cooperación Latino Americana de Redes Avanzadas) initiative. CLARA has been an emerging organisation during Phase A of the project and was able to consolidate into a stable organisation between 2005 and 2008. Phase A was able to raise considerable awareness of the issues and benefits of the ALICE initiative.

Earlier work carried out in the CAESAR project had undertaken a market survey of potential connectivity within Latin America and served as a basis for the procurement activities carried out during Phase A of ALICE. The procurement activity was led by DANTE with active co-operation from individual experts from Latin America, as well as from the European partners to the project. The procurement activity was carried out using European Union public procurement rules and the negotiated procedure option.

The results of the procurement were, in general, very successful. They showed that cost effective connectivity was available for many locations at capacities greater than was originally envisaged in the CAESAR study. There was sufficient infrastructure and investment, and infrastructure competition, for the offers to a number of countries to be quite cost effective. A pan-Latin American topology emerged from these offers that defined a ring, based on STM-1 connectivity (155 Mbps), connecting Chile, Argentina, Brazil, Panama and Mexico. Other countries were connected to this central network element by point to point spur connections. In addition, a cost effective STM-4 link (622 Mbps) between Latin America and Europe was provided within the budget. Although there were cost effective offers for a number of countries, the position regarding connectivity costs, specifically, in Central America and the Andes was less encouraging. Particularly, the "in country" costs for Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras and Nicaragua were unacceptably high. Therefore, negotiations continued for Central American connectivity into Phase B of the project and the Andean countries, as much as Paraguay and Cuba were retendered in late 2004.

Cost-Sharing

As there were significant variations in the underlying costs of providing services to the different countries, an issue that had to be resolved among the Latin American NRENs was the basis on which they would share their elements of the total project costs. European experience of similar problems was used by the Latin American partners to organise a cost sharing approach based on the following parameters;

1. A share of costs based on access capacity requested according to the properly recognised cost relationship between different access speeds
2. A requirement that any connectivity, at least, covers the direct cost of a connection to that country

3.   For certain shared costs, e.g. trans-Atlantic connectivity, operational costs etc., these are shared partly on a geographically dependent and partly on a geographically independent basis

Phase B: Implementation

As foreseen after Phase A, RedCLARA became a reality in September 2004. 01 September 2004 saw an email celebration among the ALICE partners when the first packet of research traffic crossed from Santiago de Chile to Madrid using the RedCLARA network. From September onwards the roll-out of the network progressed slowly but steadily. The challenges that arose during the roll-out showed what a novelty RedCLARA was for Latin America and that RedCLARA requirements exceeded the Latin American norm. It is positive to note that DANTE, CLARA and the providers Global Crossing and Logicalis were able to find solutions to all arising challenges which means that the implementation of RedCLARA opened new possibilities in the Latin American telecommunications market.

During 2005, the CLARA Network Engineering Group and the CLARA Network Operations Centre became fully operational and assured smooth implementation and operations of the RedCLARA network. Technical meetings were held regularly with engineers from the Latin American community and technical documents were created. The CLARA NOC started producing regular RedCLARA network statistics in January 2005.

PR activities

From the start of the project, ALICE focused on PR activities. These were supported by CLARA´s PR team based in the Chilean NREN. Regular news stories, press releases and updates were circulated throughout the project lifetime. Special emphasis was given to the development of the RedCLARA website.

During 2004, the PR activities focused on the launch of the RedCLARA network. The launch event was celebrated during the EU-LAC Summit of the Information Society in Rio de Janeiro in November 2004. Thanks to the launch event itself, the promotional material (especially the video) and the press releases issued around this event, RedCLARA and CLARA reached a new level of political visibility in Europe and Latin America. The momentum towards a Latin American research network which was originally created in Toledo 2002 at the first meeting between representatives of European and Latin American research networks received a fresh and powerful impulse in Rio de Janeiro.

Challenges

The main challenge faced by the ALICE project during its life-time was the non-payment from Argentina and Panama and the very late payments received from Venezuela. During 2006, these challenges were overcome thanks to high-level involvement of the Argentine government and a renewed commitment from Panama to ALICE. By February 2007, the ALICE project had collected the 2.5M Euro representing the 20% contribution from the Latin American partners and financially sound. The Latin American NRENs kept contributing to the costs of the RedCLARA network throughout 2007 and 2008, thus collecting the funds necessary to keep running the RedCLARA network during the rest of 2008.

Another issue faced by the project was the inability of the NRENs in Costa Rica and Nicaragua to keep paying their share of the 20% Latin American contribution. For these purely financial reasons, connectivity to the Costa Rican NREN was suspended in mid-2006 and the Nicaraguan NREN cancelled its subscription to RedCLARA in March 2007. CLARA is in constant dialogue with the NRENs and governments in Nicaragua and Costa Rica to ensure the re-connection of these two countries.

Sustainability

Beginning in Q1/2005, DANTE and CLARA focused their activities on the financial and organisational sustainability of RedCLARA and CLARA. To that end, DANTE developed scenarios to show the CLARA partners their option for financial independence after March 2008. In the discussions, however, it became soon evident that CLARA and the Latin American NRENs would not be able to rapidly increase their contributions to the RedCLARA network and that there was a clear

need for ongoing outside financial support for RedCLARA after the end of the ALICE project in March 2008. DANTE and CLARA raised the awareness of the need for continuity of EC funding and involvement in RedCLARA beyond 2008. A major activity was carried out in preparation of the EU-LAC summit of the Information Society which was held in Lisbon during April 2006 and followed by the Summit of the EU-LAC Heads of State in Vienna in May 2006. During the EU-LAC summit of the Information Society various LA countries, their European counterparts and also the Commissioner for Information Society and Media called for ongoing EC financial support for RedCLARA.

In the short term, financial sustainability has been achieved. Thanks to the oversubscription of the Latin American ALICE partners, the project has been able to collect funding which ensure CLARA´s and RedCLARA´s survival during 2008. At the time of writing the report, CLARA is negotiating continuity of ECD funding for R&E networking in Latin America. It is a clear objective that the CLARA community will be financially sustainable within the next three to five years.

Long-term organisational sustainability has been achieved. The CLARA organisation was created following the Toledo workshop in 2002. The organisation registered as an international not for profit organisation in Uruguay in December 2003. 2005 and 2006 were the years of consolidation for the CLARA organisation. Since then, the organisation has consisted of a Chief Executive Officer, a Network Engineering Team, a Network Operations Team, a Project Manager, a PR Manager, a Training Manager and a Chief Financial Officer. CLARA consciously took the decision to be a distributed organisation with staff in Chile, Brazil, Mexico, Peru and Uruguay. One of the main achievements of the ALICE project is the fact that at the end of the project, both RedCLARA and CLARA continue. CLARA is a consolidated organisation and a new international player representing Latin American research and education networking to the world. This is the main achievement of the ALICE project.

2. Introduction

This Final Technical Report of the ALICE project describes the activities carried out by the project between 03 June 2003 and 02 April 2008.

Within the framework of the @LIS programme, the ALICE project aimed at establishing an organised interconnection between the Research and Academic Communities of Latin America and Europe. The project addressed the objectives of @LIS Activity 4 (Interconnection), namely, the fostering of research collaboration between the European and Latin American regions, and assisting the @LIS demonstration projects being funded through @LIS Activity 5 (take up projects).

The ALICE project was conceived as being split into Phases A and B. Phase A of ALICE was the planning and procurement phase of the project. The successful Phase A led to the actual implementation of the project during Phase B.

The ALICE project was co-ordinated by DANTE and partnered by the National Research and Education Networks (NRENs) of the 18 @LIS beneficiary countries and four European countries. Another important partner in the project was CLARA, the Latin American Co-operation of Advanced Networks (Cooperacion Latino Americana de Redes Avanzadas) founded as a response to the ALICE project in late 2003.

In order to set the scene the report describes the original objectives and work plan of the project, then goes on to describe the detail of the activities being carried out, the challenges and problems encountered and finalises with a list of conclusions drawn from ALICE.

3. Foreseen project objectives for the reporting period

3.1 Objectives

The overall ALICE objectives as set out in the Grant Applications Form which supported the project proposal were the following:

(i)   Foster the development of cooperative research programmes between the European and Latin American research and education communities

(ii) Stimulate competitive behaviours by telecom and service operators in the Latin American area

(iii) Provide infrastructure that supports the development and deployment of the Information Society applications, initially through the @LIS demonstration projects

(iv) Quicken the overall economic development rate through modernisation of key sectors and the most active layers of Latin American societies.

(v)   Foster cohesion by allowing the maximum number possible of LA-Partners to benefit and applying equitable policies for resource allocation (recognising the different starting points in terms of current levels of service, service costs and of state of development of research networking throughout the 18 partner countries).

Furthermore, the ALICE project was tasked to implement the recommendations of the CAESAR study which are summarised as follows:

- create and consolidate a regional Latin American research network infrastructure which interconnects the research and education networks in Latin America

- operate and manage the Latin American research network infrastructure from Latin America

- directly interconnect the Latin American research network with the pan-European research network, GEANT.

- operate and manage the interconnection between the Latin American research network infrastructure and GEANT jointly from Europe and Latin America.

- closely cooperate between EU-NRENs, LA-Partners and DANTE on all matters concerning ALICE.

- provide the necessary infrastructure for the @LIS demonstration projects as well as for researchers and students involved in collaborative research between the two regions

3.2 Foreseen activities

The Grant Application Form that supported the project proposal foresaw the following activities to be carried out during Phase A and B of ALICE.

Work Package 0 – Project Management
- Co-ordinating and administering the project with EuropeAid, in conjunction with European and Latin American project partners.
- Sustainability

Work Package 1 – Procurement
- Specification of connectivity, equipment and operational support for the regional infrastructure and its links with Latin American national research and education networks and GÉANT.
- Procuring the infrastructure and support services in accordance with EU procurement rules. As a result of the tender evaluation DANTE will be recommending suppliers to be awarded with the contracts after EC approval of the procurement report.

Work Package 2 – Network Design
- Developing topology, equipment and routing plans for the regional Latin American network and its interconnection to GEANT

Work Package 3 – Supplier and Service providers Agreements
- Establishing commercial agreements with service providers and equipment suppliers for the LA partners to subscribe for service using the infrastructure

Work Package 4 – Implementation
- Managing the delivery and testing of the Latin American regional research infrastructure and support services and its interconnection with the Latin American national networks and GEANT.

Work Package 5 – Operations
- Establishing and managing in life network management and operational functions

Work Package 6 – Subscriber Management
- Establishing contractual relationships with the Latin American research networks that will connect to the Latin American regional research infrastructure and to its interconnection to GEANT

Work Package 7 – Technical Support
- Developing and running capacity building programmes to transfer technical and operational skills and expertise to and among LA Partners during ALICE

Work Package 8 - Project reporting
- Preparing annual and final project reports and project deliverables.

Work Package 9 – Promotion
- Promoting the project to potential users, including the @LIS demonstration projects, operators and national governments

3.3 Expected Results

Work Package 0 – Project Management
Next to the daily work of the management of the project, it was expected that the Project would hold one project meeting at the end of Phase A to discuss the results of the procurement and the LA-NREN commitment to Phase B. During Phase B, it was foreseen that the project would hold two project meetings per calendar year.

Work Package 1 – Procurement
Connectivity and equipment procurement was to be carried out. Connectivity and Equipment were to be tendered for in two distinct procurement activities following EC rules for public procurement. Results of the procurement activity were to be presented at the end of Phase A.

Work Package 2 – Network Design
A technical plan including an initial network topology was to be developed.

Work Package 3 – Supplier and Service providers Agreements
This activity was to be carried out at the end of Phase A and would lay the basis for the commercial relationships with connectivity and equipment providers during Phase B.

Work Package 4 – Implementation
A delivery and testing plan for the Latin American network and its interconnection to Europe was to be developed. New services were to be introduced once the physical infrastructure was established.

Work Package 5 – Operations
An operational plan was to be developed. Once the Latin American network was impmeneted, the operational management of the production network was to be carried out.

Work Package 6 – Subscriber Management
Establishing contractual relationships with the Latin American research networks that will connect to the Latin American regional research infrastructure and to its interconnection to GEANT

Work Package 7 – Technical Support
Technical meetings were to be organised among the project partners. A questionnaire assessing the training and technical support needs was to be developed, distributed and the responses analysed.

Work Package 8 - Project reporting
Deliverables and technical reports were to be prepared.

The following table taken from the Grant Application Form lists the Deliverables to be submitted during the lifetime of ALICE

Del. no.*	Deliverable name	Partner Responsible short name	Estimat ed person- months	Deliverab le. type**	Circulati on***	Delivery date (month from project start)
D 0.1	ALICE Project Meetings, 2-3 per year	DANTE		Meeting minutes	@LIS	0
D0.2	ALICE Phase A DANTE/ LA-Partners bilateral agreements	DANTE		Agreemen ts	Sign-atories and EC only	2
D0.3	ALICE Phase A DANTE/EU-NREN agreements	DANTE		Agree-ment	Sign-atories and EC only	2
D0.4	ALICE financial administration system	DANTE		system		2
D.0.5	ALICE Phase B DANTE/LA-Partners bilateral agreements	DANTE		Agreemen ts	Signatori es and EC only	10
D.06	Sustainability Plan	DANTE/ CLARA		document	@LIS	24
D1.1	Call for connectivity tender	DANTE		document	public	1
D1.2	Call for equipment tender	DANTE		document	public	1
D1.3	Connectivity supplier Information Event	DANTE		event	public	2
D1.4	Connectivity tender documentation	DANTE		document	public	2
D1.5	Equipment tender documentation	DANTE		document	public	4
D1.6	Connectivity supplier recommendations	DANTE		report	@LIS	7
D1.7	Equipment supplier recommendations	DANTE		report	@LIS	7
D2.1	Initial network topology	RNP		report	@LIS	6
D2.2	Routing and addressing plans	RNP		report	@LIS	8
D3.1	Connectivity service contracts	DANTE		document	DANTE, EC	8
D3.2	Equipment supply contracts	DANTE		document	DANTE, EC	8
D3.3	Network management contract for intercontinental connection	DANTE		document	DANTE. GÉANT EC	8
D 3.4	Network Management Contract for LA regional network	DANTE		document	DANTE, EC	8
D4.1	Implementation and Test Plan	CUDI		document	@LIS	7
D4.2	CLARA network ready for testing	CUDI		Network	@LIS	From 9

D4.3	GÉANT interconnection ready	DANTE/ CUDI		Network	@LIS	10
D4.3	CLARA network Ready for Service	CUDI		Network	@LIS	From 10
D5.1	CLARA network Operational Model	REUNA		document	@LIS	10
D5.2	CLARA network Processes and procedures	REUNA		document	@LIS	10
D5.3	CLARA/GÉANT operational agreement	DANTE/ RNP		document	@LIS, GÉANT	10
D6.1	DANTE/LA-Partners bilateral subscription offers	DANTE		document	Sign-atories	8
D6.2	DANTE/LA-Partners bilateral Subscription contracts	DANTE		Sub-contract	Sign-atories	9
D6.3	LA-Partners services start	DANTE		network	@LIS	From 10
D6.3	DANTE/LA-Partners bilateral subscription reviews	DANTE		Sub-contract revisions	Sign-atories	18,30
D7.1	First ALICE A technical meeting	DANTE		Workshop	@LIS	2
D7.2	Technical Support Plan	DANTE/EU -NRENs		Document	@LIS	3
D7.3	ALICE A technical support	DANTE/EU -NRENs		training	@LIS	3-8
D7.4	ALICE B technical support	DANTE/EU -NRENs		training	@LIS	9-35
D8.1	Procurement Report	DANTE		report	DANTE, EC	7
D8.2	Annual reports	DANTE/RA U		report	@LIS	12, 24, 35
D8.3	Final Report	DANTE/RA U		report	@LIS	41
D9.1	ALICE website	DANTE/ CLARA		website	Public	3
D9.2	Demonstration projects demand assessment	DANTE/ CLARA		report	@LIS	9
D9.3	Promotional Plan	DANTE/ CLARA		report	@LIS	12
D9.4	CLARA & ALICE Launch Event	DANTE/ CLARA		event	public	15
	TOTAL					

In the form <WP-nr>.<seq.nr> (e.g. 3.1, 3.2, 3.3 etc for the Deliverables of WP3)

** *A short, self-evident description e.g. report, demonstration, conference, specification, prototype…*

***Proj.. Internal circulation within project (and Commission Project Offices and reviewers)*
 Sector   Circulation within @LIS Sector participants
 @LIS   Circulation within @LIS Programme participants
 Pub.   Public document
Table 1: Complete list of ALICE Deliverables as foreseen in the Grant Application form

Work Package 9 – Promotion

The ALICE logo, website and brochure were to be developed. Awareness of the project was to be raised within the Latin American and European research community, but also within Latin American and European governments and funding agencies. The @LIS demonstration projects were to be contacted and their connectivity needs assessed.

4. Project progress and achievements

4.1 Implementation of the activities

At the beginning of the ALICE project, the activities were mainly carried out by DANTE with support given by the European NRENs. However, increasingly during ALICE, the Latin American NRENs and especially CLARA took on greater responsibility of the management of the project.

Work Package 0 – Project Management

Project Management was mainly carried out by DANTE and supported by CLARA. Regular project meetings were held in Latin America, such as San José de Costa Rica (November 2003), Lima (July 2004), Rio de Janeiro (November 2004), Antigua de Guatemala (July 2005), Montevideo (November 2005), Quito (July 2006), San Salvador (November 2006), Bogota (June 2007) and Ciudad de Panama (November 2007). In addition an "ALICE2" preparation meeting was held in Buenos Aires in March 2008. These meetings were organised with the help of the hosting NREN.

Work Package 1 – Procurement

As defined in the ALICE contract, which stated that all activity related to the Special Fund needed to be in the responsibility of the contracting partner, the procurement activities were mainly carried out by DANTE. The evaluation of the connectivity procurement and the subsequent discussions with the providers were supported by members of the following research networks: CLARA, RNP (Brazil), REUNA (Chile), CUDI (Mexico), CEDIA (Ecuador) and the European partner RedIRIS (Spain).

Work Package 2 – Network Design

The work in this work package was carried out by CLARA-NEG, the CLARA Network Engineering Group established in June 2004.

Work Package 3 – Supplier and Service providers Agreements

Work in this work package was mainly carried out by DANTE.

Work Package 4 – Implementation

The work in this work package was carried out by CLARA-NEG (Network Engineering Group) and CLARA-NOC (Network Operations Centre) in close co-operation with technical staff at DANTE.

Regular video-conferences were held between DANTE and CLARA to deal with issues concerning the implementation and operations of RedCLARA. Agendas and minutes of these video-conferences were prepared and written by DANTE.

Work Package 5 – Operations

The work in this work package was carried out CLARA-NEG and CLARA-NOC, in close co-operation with technical staff at DANTE.

Regular video-conferences were held between DANTE and CLARA to deal with issues concerning the implementation and operations of RedCLARA. Agendas and minutes of these video-conferences were prepared and written by DANTE.

Work Package 6 – Subscriber Management

In the beginning of the ALICE project, work in this work package was carried out by DANTE. From July 2007 onwards, CLARA took full responsibility of the Subscriber Management.

Work Package 7 – Technical Support

The work was carried out by CLARA-Tec, the CLARA Technical Committee and the Brazilian NREN (RNP). ALICE-CLARA Technical Meetings were organised in Rio de Janeiro (November 2004), Veracruz (April 2005), Caracas (November 2005), Cauca (2005), in Quito (July 2006), San Salvador (November 2006), Bogota (June 2007) and Ciudad de Panama (November 2007). In

addition, Latin American engineers travelled to the TERENA Conference in Catania and the RedIRIS Jornadas Tecnicas in Logroño. All the training meetings were organised between CLARA, DANTE and RNP and supported by the hosting NREN.

Work Package 8 - Project reporting
The work was carried out by DANTE.

Work Package 9 – Promotion
Work on the ALICE website hosted by DANTE was carried out by DANTE. DANTE was also responsible for the creation of ALICE brochures and topologies map.

CLARA supported by REUNA (Chile) and RNP (Brazil) was responsible for the creation of the RedCLARA website and issued regularly the DeCLARA newsletter and bulletin reporting on the advances of Latin American research networking.

Deviations from planned work

During the first year of ALICE, a deviation from planned work occurred in work package 7 – technical support. It was envisaged and budgeted that at least two technical meetings should take place during the first Year of Phase B of ALICE. The project, however, could only organise one technical meeting during the period. The main reason for this was the fact that during a large part of the first year the NREN engineers were busy with the implementation and the beginning of the operations of the RedCLARA network and found it difficult to organise a technical meeting. From April 2004 onwards, regular and bi-annual technical meetings and training workshops took place.

Further deviation from plan occurred regarding two deliverables: D0.5 (EU-NREN contract for Phase B) and D9.3 (Promotional Plan).

D0.5 foresaw that DANTE and the EU-NRENs would sign a contract defining the travel and per diems allowance of the EU-NRENs in Phase B, as well as defining the manpower the EU-NRENs would contribute to the project during Phase B of ALICE. It was, however, noticed that during Phase A and the beginning of Phase B, the travel and per diems allowance foreseen for the EU-NRENs to be used during Phase A was not used up. It was therefore anticipated that the allowance foreseen in the Phase A contract would last until the end of the ALICE project. The same holds for the manpower contribution. For these reasons, there was no need for an additional Phase B contract between DANTE and the EU-NRENs and this Deliverable was dropped from the list of deliverables.

D9.3, the Promotional Plan was to be delivered in September 2004. However, due to the ALICE launch event which tied up all PR manpower available for the project, this deliverable could not be written or submitted during 2004, but in February 2005.

Measures taken so far to ensure sustainability

The following text was provided by Florencio Utreras, CEO, CLARA, as CLARA has the responsibility to sustain the RedCLARA network beyond April 2008.

RedCLARA Present Topology and Connectivity Costs

The ALICE Project designed and deployed the RedCLARA Network starting in September 2004 and connected 14 Latin American NRENs to the network, namely: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Peru, Uruguay and Venezuela. The topology of the network was then as follows:
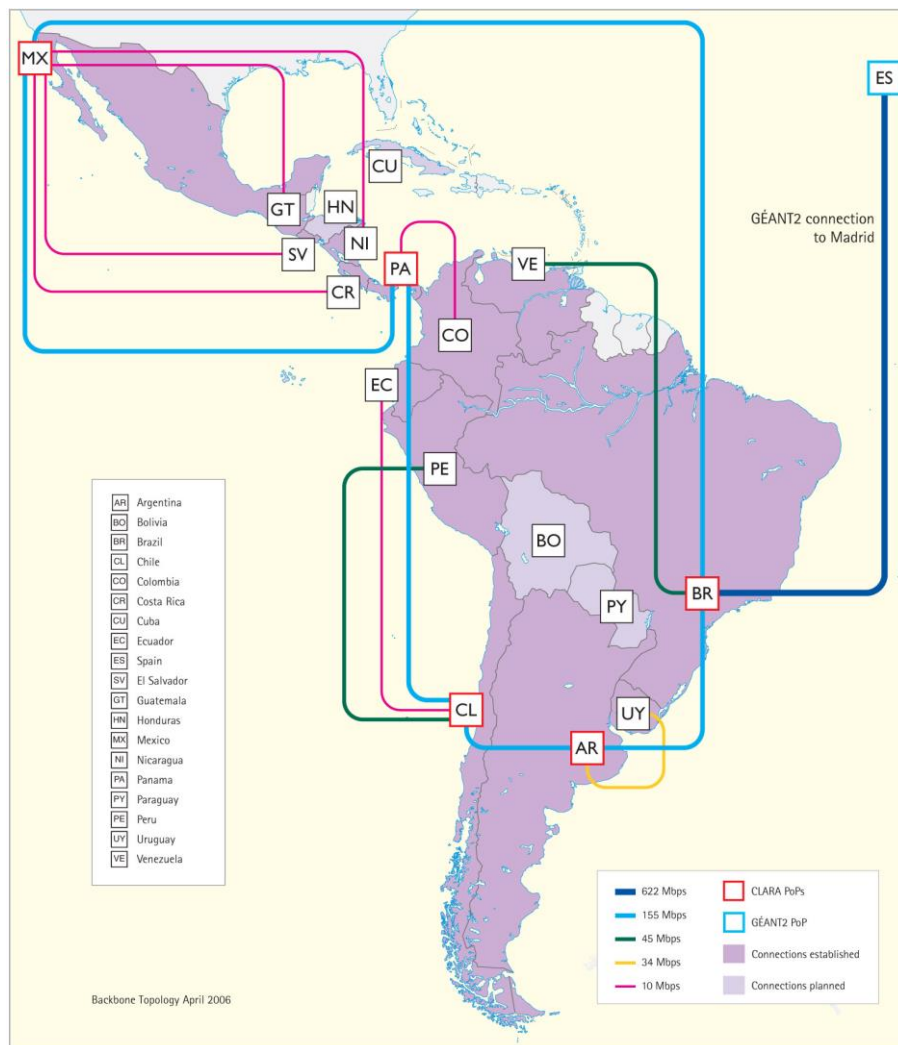

Figure 1: The RedCLARA Topology April 2006

The core of the network (backbone) was built using five network nodes (PoPs) where traffic was accumulated and five links interconnecting these nodes, all of them leased from a submarine cable provider which also provided the transatlantic link between the RedCLARA and GEANT in Madrid.

Due to the limitations of the Latin American telecommunications market in 2004, some of the links contracted via ALICE were quite expensive, specifically the links to Costa Rica, Guatemala, El Salvador and Nicaragua. For this reason and despite the high level of support from the EC and the cross-subsidy of the other Latin American countries, Costa Rica and Nicaragua decided to leave RedCLARA as they were unable to co-fund their 20% share.

In March 2006, RedCLARA received also the support of the US Agency, NSF, which through their IRNC Program assigned funding to pay two links connecting RedCLARA to the US Networks. One of these links connects Tijuana to San Diego and the other Sao Paulo to Miami and New York. Through these links, RedCLARA can also offer connectivity to Canada and the Asian Pacific Countries.

During the ALICE Meeting in El Salvador in November 2006, and in view of the possible shortage of funding during 2008, the Latin American ALICE partners decided to introduce several changes to the network in order to lower its operational costs while maintaining most of its technical characteristics.

The changes included the installation of a node in Miami, at the NAP of the Americas, for the connection of the Central American Countries to Miami; the signature of an agreement with LAUREN, an US based organisation that provides cost-effective international links; the contribution of ANTEL Uruguay in the form of a free circuit to Montevideo and the contribution of CIEMAT from Spain.

Based on the savings achieved, the ALICE project could be extended until 02 April 2008. The network was smoothly transitioned from its original topology to the new topology, described in the following diagram:

Figure 2: RedCLARA Topology August 2007

Administration, Management, Collaboration Activitities

RedCLARA Management, operations and engineering are maintained at a minimum level permitting a smooth operation. For this CLARA has structured the main functions in the following way:

- General Management
- Financial Management
- Project Management
- Training and Knowledge Management
- Network Engineering
- Network Operations
- Public Relations

The first four functions are carried out by selected professionals working from Chile, Uruguay and Mexico. These four persons are the central staff of CLARA and the only fixed cost personnel. The other three functions are performed by selected LA NRENs which are subcontracted by CLARA and have been chosen using an internal tendering process among the Latin American partners.
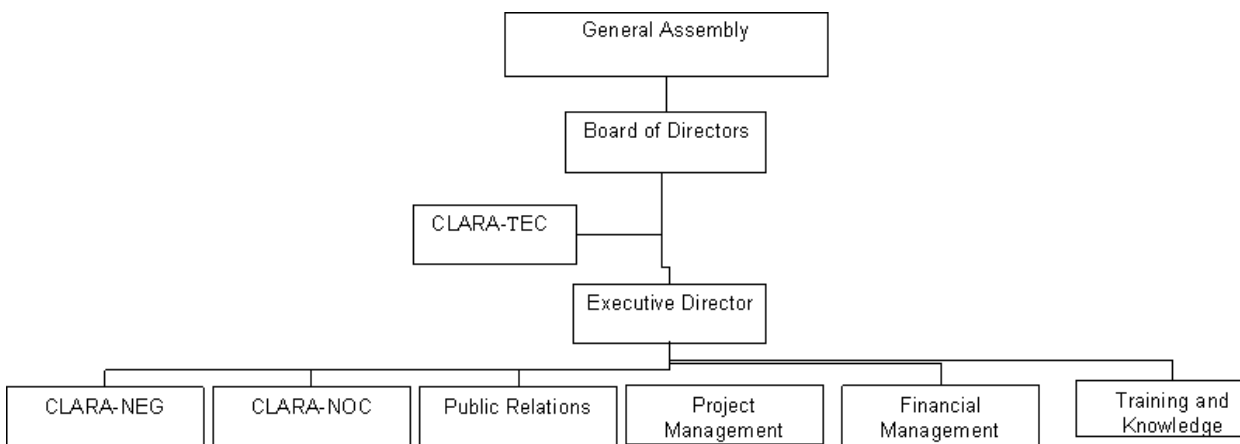
The organisational diagramme of CLARA is the as follows:

Figure 3: The organisational diagram of CLARA

This team is indeed of a minimum size when considering all activities carried out by CLARA which includes contracting, membership management, financial management, the fostering of project development, the training of technicians and NREN managers, the dissemination activities and several other aiming at becoming part of the regional bodies working for the development of a better Latin America.

In the near future, expansion of the CLARA staff must at least consider a larger Finance and Administration Team as well as a permanent Engineering Leader inside central staff. It is currently not considered to have in-house network operations and the subcontracting of Operations and PR will continue to be a central part of a flexible management strategy.

Funding Issues

Once ALICE terminates on 02 April 2008, CLARA will be entirely dependent on the contributions of its Latin American partners which amount to approximately US$ 1.75M per year.

Given the current status of the Latin American NRENs, it is extremely unlikely that their contribution can be increased in the short term. Even more, experience has shown that even the present contribution may be very difficult to bear for several countries as it has already been the case for Costa Rica and Nicaragua which had to freeze their membership to CLARA and disconnect from RedCLARA because of impossibility of paying their contribution.

During 2007 CLARA has received several contributions from external sources that helped to maintain the network, while allowing for the second extension of ALICE to 02 April 2008. In particular the ANTEL donation must be mentioned (Uruguay) which brings one year of free service from July 2007 until June 2008 and the contribution from CIEMAT (Spain) which contributed to RedCLARA in order to ensure a reliable network for the EC co-financed EELA Project.

During 2008 CLARA will still have the contribution from ANTEL until June 2008 and a partial donation for the rest of the year is still under negotiations. Also CIEMAT will continue to contribute, but the level of their support will be smaller than during 2007.

From April 2008 onwards, RedCLARA will therefore rely entirely on the contribution of the Latin American partners.

Short Term Strategy

For the short term, that is from April 2008 until the end of 2008 CLARA has designed a strategy based on the following elements:

   a) Careful negotiations of the existing contracts for the backbone and main links to significantly reduce the cost of the main links
   b) Reduction of capacity in one of the most expensive links (Mexico)
   c) Reduction of costs at the level of space renting in co-location sites
   d) Reduction of costs in maintenance of equipment based on specifics of the equipment and reduction in the type of support
   e) Search for new providers which can also contribute with (partially) donated capacity at least for a one year period

Items a) through d) are being successfully addressed and it is expected to reduce the connectivity costs in the main links by over 50%.

Nevertheless, some countries have extremely expensive telecommunication costs, such as Ecuador, Colombia, Guatemala, El Salvador and Uruguay.

For Uruguay, RAU, the Uruguayan partner is working very closely with ANTEL to reduce the cost of their connectivity to the RedCLARA POP in Buenos Aires and it is expected a 40% reduction in that cost for the second semester of 2008.

The most interesting cases of price reduction are to be found in Colombia and Ecuador where a new provider, whose infrastructure is based on fiber optic installed on top of the electrical transmission towers, is offering carrier services based on a terrestrial infrastructure which competes with the submarine cables. This infrastructure crosses the borders between Venezuela, Colombia, Ecuador and Perú and is brings new competition for the provision of future capacities based on wavelengths or dark fiber for ALICE2.

For 2008 a partial donation of services allowing the replacement of the existing 10 Mbps links (Bogota-Panama and Guayaquil-Santiago) by a 155 Mbps connecting Bogota and Guayaquil to Lima by a price equivalent to one of the 10 Mbps circuits has been negotiated. Once in Lima, the connection to the RedCLARA backbone is provided to the 3 countries (Colombia, Ecuador, Peru) by increasing the present capacity of the Lima-Santiago link.

Adding all this efforts and one still underway in Central America, it is intended to reduce the overall connectivity cost by 40%.

Sustainability Enabling Factors

CLARA's long term self sustainability depends on several factors, some of them being under its control or the one of its partners, some not. Namely:

    a) The strengthening and self sustainability of the Latin American NRENs.
    b) The increase of Latin American governments´ investment in Science, Technology, Innovation and Higher Education
    c) The awareness of the political decision makers of the importance of NRENs
    d) The evolution of the telecommunications market in the region

All these factors are in evolution in Latin America and changes are expected during a 5 year period as is being analysed below.

NREN Structural Stability

When the ALICE Project was started in June 2003, there were only six NRENs in Latin America providing services to their national communities, namely: RETINA(Argentina), RNP (Brazil), REUNA (Chile), CR2Net (Costa Rica), CUDI (México) and REACCIUN (Venezuela). All of them were at different technical and organisational levels, with five of them connected to the Internet2 via direct connections from their countries to the US via the AMPATH project.

During the lifetime of the ALICE Project, nine additional NRENs were created: RENATA (Colombia), RedUniv (Cuba), CEDIA (Ecuador), RAICES (El Salvador), RAGIE (Guatemala), RENIA (Nicaragua), REDCYT (Panamá), RAAP (Perú), RAU (Uruguay); while 3 more are in the process of creation: ADSIB (Bolivia), RHUTA (Honduras) and ARANDU (Paraguay).

Eight of these newly created NRENs have completed the creation of a Legal Entity in their countries in order to take on the management and operation of their National Networks and are working towards the establishment of national backbones that will allow them to connect all Universities and Research Institutions in their respective countries. However, with the exception of RENATA in Colombia and CEDIA in Ecuador the new NRENs are only covering the institutions in the Capital City of their countries.

The deployment of RedCLARA has been a tremendous incentive towards the creation of National Research and Education Networks, but many of them are at a very early stage of development. They must develop their national backbones, strengthen their internal organisation, develop strong ties to the national Education, Science and Technology and Innovation policies and ensure internal cohesion that will allow them to generate the financial and organisational stability.

Following the history of the development of the NRENs in Latin America and around the World, many of the NRENs will still need three to four years of development to reach the status where they can be considered solid and stable organisations.

Certainly the older and better developed NRENs in Latin America are willing to help in order to shorten this development period as much as possible by providing advice both in technical and organisational matters and helping to promote the concept among governments and regional bodies.

To this end, CLARA has obtained support from the Inter American Development Bank through the Regional Public Goods Programme to develop a Project called "Strengthening the Advanced Academic Networks in the Region through CLARA as a Regional Public Good". The project has been awarded a US$ 600.000 Grant and its main activities are:

I.- Identify a Regional Regulatory Framework favoring the integration of the services provided by the NRENs
    I.1.- Seek the coordination of national policies related to NRENs in Science and Technology as well as Telecommunications
    I.2.- Coordinate and integrate the "Acceptable Use Policies" of the NRENs

II.- Develop a Regional Business Plan
       II.1.- Develop a Mid Term Business Plan for CLARA including the eventual re-design of its institutional model
       II.2.- Develop a Membership Model for CLARA that allows the inclusion of other type institutions with common interests
       III.3.- Development of a Membership promotion plan as well as a donor seeking process
III.- Develop a set of regional instruments to Strengthen the NRENs
       III.1.- Develop a Regional Protocol of Good Practices
       III.2.- Develop a Master Marketing Plan suitable to adapt to each NREN
       III.3.- Implementation of an Information System of the National Networks
       III.4.- Development of a White Book of NRENs in the Region as well as other promotional material
       III.5.- Develop a set of Seminars to Strengthen the Management capabilities of the NRENs
       III.6.- Develop Business Plans for each NREN
IV.- Carry on at least 3 demonstration cases of regional impact
       IV.1.- Identify 3 major pilot projects to prove the relevance of RedCLARA as a tool for development of the region

The BID project commenced at the end of 2007 and is scheduled to finish at the end of 2009. It is expected that the results of this project will lead to a more structured work by the NRENs and hence to a consolidation of their activity.

The Political Landscape

ALICE has been a success not only in creating RedCLARA, but also in the creation of CLARA, the organisation which will be in charge of the management, operation and development of future versions of RedCLARA and fostering the use of information networks in education, science, technology and innovation in the region. This has been a key factor, since the CLARA organisation has been able to put the topic of academic networking in the political discussions in the Latin American region.

The first time CLARA participated as such in a regional political event was in the November 2004 Summit of Ministers of Science and Technology of the Americas, where the Final Declaration acknowledged the importance of academic networking for the development of better science and technology in the region. More precisely, Action Item N°8 states:

"*Facilitate the greatest interaction possible between scientific and technologic research communities by fostering the establishment and consolidation of advanced research networks and synergy among educational institutions, research centers, the public and private sectors, and civil society*".

During the same month of November 2004, RedCLARA, the network created by ALICE was launched at the "EU-LAC Ministerial Summit on Information Society" held in Rio de Janeiro and its arrival was welcomed in the Final Declaration:

"*Welcome with satisfaction the launch of the first pan-Latin American research and education network, CLARA (Latin American Cooperation for Advanced Networks), and its interconnection with the pan-European network GÉANT – as one of the most relevant outcomes of the @LIS programme. Support the objective of the expansion of network coverage to the whole region. Trust in the potential of the CLARA Network as a platform for multiple cooperation initiatives on education and research and development in areas of common interest for both regions and emphasise the importance of their future sustainability*".

This visibility of RedCLARA and the CLARA organisation at regional and intercontinental level was key in the introduction of Academic Networking as a key issue in the eLAC Programm for Information Society in Latin America and the Caribbean, whose Programm approved in the eLAC Meeting in Rio in September 2005, includes Goal N° 10:
10.1 Develop and expand at the national, subregional -- especially in the Caribbean -- and regional levels advanced ICT-based networks for research and education while strengthening existing networks, such as the CLARA network.

10.2 Interconnect these networks with similar networks in other regions

This is specialy important for Latin America, since it includes in the Regional Working Agenda, the topic of Academic (R&E) Networks. It has been crucial to raise visibility among LAC Governments and it was key in the unified support given by LAC Governments during the Lisbon EU LAC Summit of Information Society where it was included in Paragraph 13 of the Final Declaration:

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

Today CLARA is an active participant in the eLAC Meetings and has been given direct tuition over Working Group 10. During the San Salvador Summit of the LAC Ministers of Information Society in March 2008, the Academic Networks have become even a higher priority among LAC Governments.

CLARA also participated actively in the World Summit of the Information Society, the Summit of the Americas in Mar del Plata, the Vienna Summit of Europe and LAC Chiefs of State and several other regional forums.

As Governmental support is crucial for the self sustainability and domestic expansion of academic networks, the position attained by CLARA within the eLAC activities is seen as crucial for the development of the NRENs and for RedCLARA. CLARA's plan is to continue working within the eLAC Framework and especially in the task of working together with other initiatives, like CKLN for the Caribbean in order to support the expansion of academic networking into that area of the region.

The Evolving Telecommunications Market in Latin America
The telecommunications market that ALICE faced in 2004 was extremely complex and included several monopolies and closed markets in several countries. Moreover, several carriers were facing bankruptcy and as a consequence could not be very aggressive in pricing since were under Chapter 11 protection and their continuity was still in question.

As a result of this situation, prices of services were extremely high and the ratio from the most expensive country to the cheapest country was 25 to 1.

The situation today has evolved in several directions:

a) All major carriers have left behind the bankruptcy situations and some consolidations have taken place, so the companies are financially healthy
b) Major submarine cable companies are landing in countries that had no access to that infrastructure before, e.g. Costa Rica, Colombia, Ecuador, Uruguay
c) The electrical interconnection of several countries, fueled by the Energy Crisis in the region is also given birth to terrestrial fiber optic facilities that compete with the submarine cables
d) Major infrastructure initiatives, including new roads crossing the continent, e.g. the Santos (Brazil) to Arica (Chile), and others are making possible the deployment of new fiber optic cable infrastructures that will boost competitiveness in a three to five year period

      e) Liberalisation of markets in several countries, including Costa Rica, El Salvador, etc, is producing a decline in actual prices of services

Today interesting reduction in prices are being observed, ranging from a 60% decline in the countries that were the cheapest, to 80% or 90% decrease in the countries where prices were higher. This has closed the gap between the most expensive and the cheapest, reducing the ratio to 6:1.

But what is more striking is that even with all these changes, the average difference with respect to the European markets is 10:1, simply put, the price of an wavelength (16 STM-1 s) in the northern hemisphere is equivalent to the price of an STM-1 (or 2) in the southern hemisphere!

The most interesting change has been the development of terrestrial infrastructure. In the ALICE project a study of infrastructures (http://www.redclara.net/intra/02/01.htm) has therefore been carried out which are alternative to the classical carriers and it can be observed that many electrical and gas companies have installed, or are in the process of installing fiber optic to provide service in the modality of "Carrier of Carriers", that is a capacity resellers.

A good example of these new developments is Internexa (http://www.internexa.com), a Colombian company which is a subsidiary of ISA, an electrical transportation system, which has deployed optic fiber in Colombia, Ecuador and the north of Perú and is providing services to carriers and ISPs in these countries. Recent agreements between Internexa and CANTV are allowing Internexa to reach Caracas and all of Venezuela. CLARA has been considered by Internexa a carrier and hence is is being negotiated to use their services to have good connectivity to Colombia and Ecuador where prices are 10 times those that can be found in Brazil or Chile.

Another example, this time over gas pipes is Silica Networks (http://www.silicanetworks.com). The company installed fiber optic over the gas pipes crossing the Andes between Argentina and Chile and is now provider capacity to carriers and CLARA could be considered a carrier and hence have access to their pricing in the near future.

All these new companies are a lot more flexible than classical carriers and are willing to sell Wavelengths or Dark Fiber IRUs, hence will contribute to develop a market where CLARA could buy or lease an infrastructure using a similar model the one developed by GEANT2 in Europe.

Within this framework, the long awaited "Plan Puebla Panamá", or Panama-Puebla Infrastructure Plan which intends to connect the Central American Countries in several ways is finally becoming operational. In fact, most of the electrical interconnection is already in place and fiber optic is being deployed on top of it. Thus, the Central American countries will have an alternative infrastructure within one year that will compete with the existing one and produce better prices. It will also allow the development of a Wavelength and Dark Fiber Market as the one we foresee being developed in South America.

Finally, the consolidations that we have seen in Central America, where Telmex has bought several smaller companies and in South America, where Global Crossing bought Impsat or Telefonica bought Colombia Telecom are producing major operators which are better placed to offer regional services at more competitive prices.

Medium to Long Term Strategy

As seen from our experience, LA NRENs are still in development and a major increase in their contribution to the sustainability of RedCLARA is not planned any time soon. Moreover, since the capacities of RedCLARA are still modest, a major increase in bandwidth and services will be necessary to serve the Astronomical, Climate Change, Disaster Management or Digital Libraries communities.

CLARA therefore concluded, that the only way to keep costs under control and be able to have the dramatic increase in capacity that is needed, is to have access to infrastructure, ideally, to Dark Fiber.

The advantage of Dark Fiber is that with a low maintenance cost and marginal investments in equipment its capacity can be increased essentially without limit.

The medium to long term strategy is extremely simple, seek to replace the present services by owned fiber and switch the costs of services to maintenance costs of the infrastructure.

We think that this strategy is feasible if we combine the resources of ALICE2, some in kind contributions from Governments, like for example the contribution being analysed in this moment of the "Plan Puebla Panama" to CLARA in the form of rights of use of Dark Fiber over the entire Mexico-Panama infrastructure.

Similar contributions will be possible in the near future and a creative way of working with Governments and fiber owners may lead to access to those resources by CLARA at reasonable costs, making in this way sustainability a feasible goal within a three to five year term.

4.2 Results

Results achieved (deliverables, impact seen…)

The following deliverables were made available to the EC during the lifetime of the ALICE project:

Del. no.*	Deliverable name	ALI Number	Circulation***
Additional	ALFA and ALICE	ALI-06-052	@LIS
Additional	RedCLARA supports Millennium Development Goals	ALI-07-109	@LIS
D0.1	ALICE Project Meetings, 2-3 per year	ALI-04-009	@LIS
D0.1	ALICE Project Meeting, July 2004, Lima, Peru	ALI-04-141	@LIS
D0.1	ALICE Project Meeting, November 2004, Rio de Janeiro, Brazil	ALI-04-191	@LIS
D0.1	ALICE Project Meeting, Antigua, Guatemala, July 2005	ALI-05-154	@LIS
D0.1	ALICE Project Meeting, Montevideo, Uruguay, November 2005	ALI-06-009	@LIS
D0.1	ALICE Project Meeting, Quito, Ecuador, July 2006	ALI-06-083	@LIS
D0.1	ALICE Project Meeting, San Salvador, El Salvador, November 2006	ALI-06-118	@LIS
D0.1	ALICE Project Meeting, Bogota, Colombia, June 2007	ALI-07-056	@LIS
D0.1	ALICE Project Meeting, Ciudad de Panama, Panama, November 2007	ALI-07-093	@LIS
D0.1	ALICE2Preparation Meeting, Buenos Aires, Argentina, March 2008	ALI-08-013	@LIS
D0.2	ALICE Phase A DANTE/ LA-Partners bilateral agreements	ALI-04-010	DANTE, EC, signatories
D0.3	ALICE Phase A DANTE/EU-NREN agreements	ALI-04-011	DANTE, EC, signatories
D0.6	Sustainability Plan	ALI-05-034	@LIS
D1.1	Call for connectivity tender	ALI-04-012	public
D1.3	Connectivity supplier Information Event	ALI-04-013	
D1.4	Connectivity tender documentation	ALI-04-014	
D1.5	Equipment tender documentation	ALI-04-015	
D2.1	Initial network topology	ALI-04-017	@LIS
D2.2	Routing and addressing plan	ALI-04-149	@LIS
D3.1	Connectivity service contracts	n/a	DANTE,EC

D3.2	Equipment supply contracts	n/a	DANTE, EC
D3.3	Network management agreement for intercontinental connection	ALI-04-152	DANTE. GÉANT EC
D3.4	Network Management agreement for LA regional network	ALI-04-152	DANTE, EC
D4.1	Implementation and Test Plan	ALI-04-135	@LIS
D5.1	CLARA network Operational Model	ALI-04-137	@LIS
D5.2	CLARA network Processes and procedures	ALI-04-150	@LIS
D5.3	CLARA/GÉANT operational agreement	ALI-04-153	@LIS, GÉANT
D6.1	DANTE/LA-Partners bilateral membership offers	ALI-04-151	Signatories
D6.2	DANTE/LA-Partners bilateral membership contracts	ALI-04-151	Signatories and EC
D7.1	ALICE technical meeting	Bi-monthly meetings throughout the lifetime of ALICE	ALICE
D7.2	Technical Support Plan	ALI-04-018	@LIS
D7.4	ALICE B technical support, second technical meeting in Veracruz	ALI-05-078	@LIS
D7.4	ALICE B technical support, third technical meeting, Caracas, November 2005	ALI-05-0173	@LIS
D7.4	Training in Cauca, Ecuador	ALI-06-017	@LIS
D7.4	Training in Logrono, Spain	ALI-06-024	@LIS
D7.4	ALICE B technical support, fourth technical meeting, Quito, Ecuador, July 2006	ALI-06-086	@LIS
D7.4	Report on Attendance at TERENA Networking Conference	ALI-06-093	@LIS
D7.4	ALICE B technical support, fifth technical meeting, San Salvador, El Salvador, November 2006	ALI-06-119	@LIS
D7.4	ALICE B technical support, sixth technical meeting, Bogota, Colombia, June 2007	ALI-07-054	@LIS
D7.4	ALICE B technical support, seventh technical meeting, Ciudad de Panama, Panama, November 2007	ALI-08-004	@LIS
D8.1	Connectivity Procurement Report	3 interim reports submitted:	DANTE, EC

		ALI-04-019	
		ALI-04-068	
		ALI-04-194	
D8.1	Equipment Procurement Report	ALI-04-090	DANTE, EC
D8.1	Final Procurement Report, First Connectivity Tender	ALI-05-114	DANTE,EC
D8.1	Procurement Report Second Connectivity tender	ALI-05-176	DANTE,EC
D9.1	ALICE website	ALI-04-019	public
D9.2	Demonstration projects demand assessment	AL-04-088	@LIS
D9.3	Promotional Plan	ALI-05-032	@LIS

Table 2: Deliverables submitted to the EC between June 2003 and April 2008

Results per Work Package

Work Package 0 – Project Management

Project Management was mainly carried out by DANTE and CLARA. Communication with the partners was carried out via the electronic mailing list (alice@dante.org.uk). In addition to the mailing list, tele-conferences were being carried out involving mainly DANTE and CLARA to ensure smooth communication within the project.

Between June 2003 and April 2008 DANTE distributed 29 progress report to all ALICE partners and the EC. These progress reports ensured a regular distribution of project related information to all 23 partners in the project and also to the EC.

Regular project meetings were held in Latin America, such as San José de Costa Rica (November 2003), Lima (July 2004), Rio de Janeiro (November 2004), Antigua de Guatemala (July 2005), Montevideo (November 2005), Quito (July 2006), San Salvador (November 2006), Bogota (June 2007) and Ciudad de Panama (November 2007). In addition an "ALICE2" preparation meeting was held in Buenos Aires in March 2008. These meetings were organised with the help of the hosting NREN.

Work Package 1 – Procurement

The tender for the ALICE connectivity was submitted to the Official Journal on 29 May 2003 and made public on 7 June 2003 with the reference number 2003/S109-098017. Based on this connectivity tender and after approval from the EC, DANTE signed a contract with Global Crossing Europe on 8 July 2004 for the Latin American ring connecting Argentina, Brazil, Chile, Panama and Mexico and for spur connections to Venezuela and Peru. (see D8.1, Interim Procurement Report, AL-04-068). The EC also approved a contract with ANTEL Uruguay for the spur connection to Uruguay in December 2004. This contract was signed by DANTE on 20 January 2005 (see D8.1, Interim Procurement Report, AL-04-194). The EC also approved the contract with Telmex, Mexico, for the connectivity between RedCLARA and the NRENs in Costa Rica, El Salvador, Guatemala and Nicaragua. This contract was signed between DANTE and Telmex in the beginning of September 2005 (see D8.1 Final Procurement Report First ALICE Connectivity Tender, ALI-05-114).

The original tender did not yield affordable results for connectivity to Bolivia, Colombia, Cuba, Ecuador, Honduras and Paraguay. For that reason, DANTE retendered the connectivity to these six locations. The contract notice appeared in the Official Journal on 9 November 2004 (2004/S 218-

187868). DANTE received 27 Expressions of Interest to the tender and on 7 January 2005 DANTE received 12 proposals which were evaluated by DANTE and CLARA in January 2005. DANTE requested Best and Final Offers for Colombia, Cuba, Ecuador, Honduras and Paraguay which were received on 18 March 2005. For Bolivia, the Best and Final Offer was requested in May 2005 and received on 3 June 2005. Following the Best and Final Offers, DANTE started contract negotiations with providers to connect Bolivia, Colombia and Ecuador.

The second connectivity tender was documented in the document ALI-05-176 and resulted in the signing of connectivity contracts between DANTE and Telconet for the connection of the Ecuadorian NREN, CEDIA, to RedCLARA and between DANTE and Telecom Colombia for the connection of the Colombian NREN, RENATA.

Work Package 2 – Network Design

When the ALICE project started, all technical matter, such as the network toplogy, the planning for network roll-out, operations, etc, were being dealt with by the CLARA Technical Group and DANTE. However, in preparation for the actual implementation of RedCLARA and its operations, CLARA ran an internal tender among the Latin American NRENs to apply for the CLARA Network Engineering Group (NEG) and the CLARA Network Operations Centre (NOC).

In March 2004, proposals for the NEG were received from CUDI (Mexico), REUNA (Chile) and RNP (Brazil). Proposals for the NOC were received from CUDI (Mexico) and REUNA (Chile). The proposals were evaluated by a team of experts from RAGIE (Guatemala), ESLARED (Venezuela), LACNIC (Uruguay), University of Oregon (USA), RedIRIS (Spain), RNP (Brazil – only NOC) and DANTE.

The evaluation group recommended to the CLARA Board of Directors to award the NEG role to RNP (Brazil) and the NOC role to CUDI (Mexico). This recommendation was adopted by the CLARA BoD. Subsequently, DANTE signed a cooperation agreement with CUDI and RNP defining the roles of the NEG and NOC, their manpower, travel, per diems and related costs. (see D3.3 and 3.4 CLARA Network Management Agreement, AL-04-152).

The design of the RedCLARA network was an ongoing activity throughout the project as new connections and services were being introduced. The CLARA Network Engineering Group was responsible for the RedCLARA network design. The group made the following documents available to the ALICE project partners.

Number	Title	Authors
CLARA/NEG/2004-0001	IPv4 addressing and routing plan for CLARA network	Eriko Porto
CLARA/NEG/2004-0002	Operational Procedures for LA-NREN interaction with RedCLARA	Eriko Porto
CLARA/NEG/2004-0003	CLARA network start-up procedures	Eriko Porto & Hans Reyes
CLARA/NEG/2004-0004	CLARA network provisional backbone configurations	Eriko Porto & Cristian Henry
CLARA/NEG/2004-0005	Circuit testing procedure	Eriko Porto
CLARA/NEG/2004-0006	Multicast configuration plan for CLARA network	Eriko Porto & Hans Reyes
CLARA/NEG/2004-0007	Operational procedures for contacting the CLARA-NOC	Hans Reyes
CLARA/NEG/2005-0008	PoP-LAN deployment and configuration	Eriko Porto
CLARA/NEG/2005-0009	DNS naming and IPv4 allocation	Eriko Porto & Eduardo Alvarez
CLARA/NEG/2005-0010	CLARA network overview	Eriko Porto & Michael Stanton
CLARA/NEG/2005-0011	Connections in Central America	Eriko Porto
CLARA/NEG/2005-0012	RedCLARA acceptable use policy	Eriko Porto
CLARA/NEG/2005-0013	Implementation of native IPv6 for RedCLARA	GT-IPv6
CLARA/NEG/2007-0014	Allocation policy of IPv6 ranges to the NRENs	Eriko Porto
CLARA/NEG/2007-0015	Pacific Wave Integration	Eriko Porto
CLARA/NEG/2007-0016	NEG functions and procedures	Eriko Porto
CLARA/NEG/2007-0017	Global routing policy and BGP Communities use	Eriko Porto
CLARA/NEG/2007-0018	Contingency Plan - 2007/2008	Eriko Porto

Table 3: RedCLARA Technical Documents

Work Package 3 – Supplier and Service Providers Agreements

Supplier and Service Provider Agreements were approved by the EC and signed with Global Crossing Europe, ANTEL Uruguay, Logicalis UK, Telconet, Telecom Colombia and Telmex.

Work Package 4 – Implementation

The implementation of RedCLARA started during August 2004 and was carried out by CLARA NEG in Brazil and CLARA NOC in Mexico with the support from DANTE. The first packets crossed RedCLARA and the Atlantic from the CLARA PoP in Santiago to the GÉANT PoP in Madrid during the night from 31 August to 1 September 2004. The implementation process of the initial ring was lengthy and in parts challenging and ended only in January 2005 when final work was carried out in the CLARA Panama PoP and the ring was finally closed. Additional links were brought into service during 2005 and 2006.

Circuit	A end	B end	Type	Bandwidth (Mbps)	Provider	Commission date	Decommission date
GEANT	SAO	MAD	STM-4	622	Global Crossing	31-Aug-04	active
RedCLARA	SAO	BUE	STM-1	155	Global Crossing	31-Aug-04	active
RedCLARA	BUE	SCL	STM-1	155	Global Crossing	31-Aug-04	active
RedCLARA	SCL	PTY	STM-1	155	Global Crossing	13-Jan-05	31-Mar-07
RedCLARA	PTY	TIJ	STM-1	155	Global Crossing	13-Jan-05	active
RedCLARA	TIJ	SAO	STM-1	155	Global Crossing	15-Nov-04	30-Apr-07
REACCIUN	CCS	SAO	DS-3	45	Global Crossing	11-Oct-04	31-Jul-07
RAAP	LIM	SCL	DS-3	45	Global Crossing	13-Apr-05	active
RAU	MVD	BUE	STM-1	155	ANTEL	7-Jun-05	active
WHREN-LILA	TIJ	SAN	GigEth	1000	Dark Fiber	11-Jul-05	active
CR2Net	SJO	TIJ	5 x E1	10	TELMEX	12-Sep-05	30-Sep-06
RAGIE	GUA	TIJ	MPLS	10	TELMEX	13-Dec-05	30-Apr-07
RAICES	SAL	TIJ	MPLS	10	TELMEX	13-Dec-05	30-Apr-07
RENIA	MGA	TIJ	MPLS	10	TELMEX	21-Feb-06	30-Apr-07
CEDIA	UIO	SCL	5 x E1	10	TELCONET	18-Jan-06	active
RENATA	BOG	PTY	5 x E1	10	Colombia Telecom	24-Mar-06	active
WHREN-LILA	SAO	MIA	VC-4-2c	310	LANautilus	7-Aug-06	active
LAUREN	SCL	PTY	STM-1	155	LANautilus	23-Mar-07	active
LAUREN	PTY	MIA	STM-1	155	LANautilus	25-Mar-07	active
RAGIE	GUA	TIJ	ATM	10	GBNet/OSI	17-Apr-07	active
RAICES	SAL	TIJ	ATM	10	GBNet/OSI	17-Apr-07	active
REACCIUN (LAUREN)	CCS	PTY	DS-3	45	LANautilus	12-Jul-07	active

Table 4: RedCLARA Connectivity Implementation

Work Package 5 – Operations

During the reporting period the operations of RedCLARA were jointly managed by CLARA NEG and NOC. DANTE supported the Operations by providing information on operations and operational procedures from GÉANT2 and its predecessor networks. Video-conferences have helped to coordinate the implementations and operations and the exchange of know-how between CLARA and DANTE. The minutes of the conferences were regularly made available to the ALICE partners and the CLARA Board of Directors.

Starting in June 2004, the CLARA-NOC focused their activities on the definition of the CLARA Operational procedures, as much as the creation of the actual CLARA-NOC, including a definition of the equipment to be used. Monitoring tools were analysed and integrated.

The CLARA NOC has collected the RedCLARA network statistics for 2005 and 2006, 2007 and 2008.

Work Package 6 – Subscriber Management

The membership agreements define the contractual relationships between the parties. The Membership Agreements are combined with individual Membership Confirmation Forms that define the detail of the service delivered to the respective NREN with regard to the access to the RedCLARA network. (see D6.2 DANTE/LA-NREN Membership Contracts, as submitted)

The ALICE Membership Agreements and individual Membership Confirmation Forms were initially negotiated with CLARA and the LA-NRENs wishing to connect to RedCLARA during late spring 2004.

The membership agreements established between DANTE and the LA-NRENs participating in Phase B were reviewed and updated in close collaboration with CLARA during 2006. From July 2007 onwards, CLARA took full responsibility of the Subscriber Management.

Work Package 7 – Technical Support

ALICE-CLARA Technical Meetings were organised in Rio de Janeiro (November 2004), Veracruz (April 2005), Caracas (November 2005), Cauca (2005), Quito (July 2006), San Salvador (November 2006), Bogota (June 2007) and Ciudad de Panama (November 2007). In addition, Latin American engineers travelled to the TERENA Conference in Catania and the RedIRIS Jornadas Tecnicas in Logroño. All the training meetings were organised between CLARA, DANTE and RNP and supported by the hosting NREN.

Work Package 8 - Project reporting

Table 2 of this Final Report gives an overview of the Deliverables submitted during the reporting period. In addition the following project reports were distributed to the project partners and the EC:

Reporting Period	ALI number
June 2003	ALI-03-024
July 2003	ALI-03-037
August 2003	ALI-03-061
September 2003	ALI-03-078
October 2003	ALI-03-085
November 2003	ALI-03-106
December 2003 – January 2004	ALI-04-028
February – March 2004	AL-04-052
April – May 2004	AL-04-076
June – July 2004	AL-04-126
August – September 2004	AL-04-158
October – November 2004	AL-04-192
December 2004 – January 2005	ALI-05-031
February – March 2005	ALI-05-070
April – May - June 2005	ALI-05-112
July – August 2005	ALI-05-152
March – April 2006	ALI-06-043
May – June 2006	ALI-06-059
July – August 2006	ALI-06-096
September – October 2006	ALI-06-139
November – December 2006	ALI-07-002
January – February 2007	ALI-07-021
March – April 2007	ALI-07-039
May – June 2007	ALI-07-058
July – August 2007	ALI-07-075
September – October 2007	ALI-07-084
November – December 2007	ALI-07-112
January – February 2008	ALI-08-012

Table 5: Project Progress Reports

Work Package 9 – Promotion

The ALICE logo, brochure and website were developed. The ALICE website was created in June 2003 as part of the DANTE website to provide public information about the project and to serve as an information source for project participants. The website was upgraded as part of the DANTE corporate website upgrade in October 2003.

In March 2005, DANTE and CLARA signed an agreement giving CLARA the responsibility and budget for the execution of CLARA and ALICE related PR in Latin America. In this activity CLARA is supported by the Chilean NREN, REUNA, and the Brazilian NREN, RNP. As a result, CLARA has relaunched its website and has regularly published the "DeCLARA" Newsletters and the "DeCLARA" Express. The Newsletters have been distributed via mailing lists in Latin America and in Europe and have widely been positively accepted by the audience for its fresh and informative style of reporting. The PR contract was renewed in the beginning of 2006 and 2007.

ALICE/CLARA Launch Event:

The ALICE/CLARA Launch event was celebrated in Rio de Janeiro on 23 November 2004 during the EU-LAC Forum of the Information Society. The launch event was opened by Fabio Colasanti, Director-General of DG Information Society of the European Commission who was followed by Nelson Simoes, President of CLARA, who spoke of the significance of RedCLARA and the ALICE project from the Latin American perspective.

The audience watched a video about T@lemed, a health application of RedCLARA and its link to GÉANT. T@lemed makes use of communications networks to transfer data from medical scans performed in remote parts of Brazil for analysis by medical specialists in urban centres. When a specialist wishes to seek a second opinion, the data is rapidly transferred to Germany for further analysis. T@lemed thus provides access to advanced medical facilities for populations living in remote and inaccessible regions, ultimately helping to save lives.

The launch ceremony was concluded by Dai Davies, General Manager of DANTE.

The launch was supported by a joint ALICE-CLARA-DANTE-RNP exhibition stand at which demonstrations were operated showing the capabilities of the RedCLARA network: trans-Atlantic high-definition television and applications of the EGEE Grid project which demonstrate remote reservation and use of networked resources.

4.3 Information and dissemination

Meetings organised or attended (where / what / when)

Argentina:
- Jornadas de la Asociacion Argentina por el avance de la Ciencia, Argentina, October 2004
- Reunión de Planificación Estratégica de CLARA, Buenos Aires, Argentina, Abril 2005
- CLARA IPv6 Tour, Buenos Aires, August 2005
- Segundo Taller @LIS, Buenos Aires, December 2005

Australia:
- Asian Pacific Advanced Network meeting, Australia, July 2004

Belgium:
- Global IPv6 Launch Event, January 2004, Brussels
- Brussels Workshop on African Connectivity, Brussels, March 2006

Bolivia:
- CLEI 2003, September 2003, Bolivia
- Latin American Network Conference 2003, October 2003, Bolivia

Brazil:
- RNP Member Meeting, Brazil, May 2004
- EU-LAC Summit of the Information Society, Rio de Janeiro, Brazil, November 2004
- Latin American Network Operations and Management Symposium 2003, September 2003, Brazil
- III Workshop on Computational Grids and Applications, LNCC, Petrópolis, RJ, Brazil, January 2005
- Reunião Temática: GRADEUFRGS, Porto Alegre, RS, Brazil, March 2005.
- Companies of the Eletrobrás group, Brasília, DF, Brasil, March 2005
- International meeting on High-Energy Physics, UERJ, Rio de Janeiro, RJ, Brazil, May 2005
- FAPERJ/Rede Rio, Rio de Janeiro, RJ, Brazil, June 2005
- Medical Sciences/UERJ, Rio de Janeiro, RJ, Brazil, June 2005
- Workshop on Virtual Observatories, INPE (Instituto Nacional de Pesquisas Espaciais), São José dos Campos, October 2005
- RNP Workshop 2006, Curitiba, May 2006
- EELA Workshop, Itacuruçá, June 2006
- XXVII Encontro Nacional de Física de Partículas e Campos, Águas de Lindóia, SP, Brazil, September 2006

Chile:
- Telecomm Summit, Santiago de Chile, April 2004
- Encuentro "Ciencia, Cultura e Inovacion sobre Redes Avazadas", Chile, May 2004
- IV Encuentro Internacional de Ciencia, Cultura y Educacion sobre la Red Mundial de Investigacion y Desarrollo, Chile, May 2004
- REUNA Member Meeting, Chile, June 2004
- Evento de Lanzamiento de RedCLARA en Chile, Chile, October 2004
- Jornadas de la Sociedad Chilena de Ciencias de la Computacion, Chile, November 2004
- Seminario de la Comisión de Cooperación Internacional del Consejo Rectores Universidades de Chilenas, Santiago, November 2005
- Lanzamiento incorporación Univ. Católica de Temuco a REUNA, March 2006
- Seminario Uso de Tecnologías de Información en Docencia- Centro Eventos CENI casa central, Universidad de Santiago de Chile, April 2006
- Asamblea Ordinaria de Socios de REUNA, April 2006
- Reunión difusión REUNA y U. Del Desarrollo, September 2005
- Reunión difusión REUNA y U. SEK, November 2005

- Reunión difusión REUNA y U. Católica de Temuco, December 2005
- Reunión de difusión REUNA y Oficina Regional CNRS, March 2006
- Reunión de difusión REUNA y Universidad Andres BelloMarch 2006
- Reunión de difusión REUNA y Director de la Fundación de Ciencias para la Vida, April 2006
- Reunión de Difusión en DUOC, April 2006
- Reunión difusión REUNA y CCHEN, April 2006
- Reunión en CEPAL, en el marco de las gestiones conjuntas, REUNA y CLARA, April 2006
- Reunión REUNA y Subsecretaria de Telecomunicaciones (Subtel, socio del proyecto @LIS, Regulatel), en el marco de las gestiones con Regulatel, May 2006
- Reunión REUNA y el encargado técnico FAO, June 2006
- First EELA Conference, Santiago, Chile, September 2006

Colombia:
- RENATA Launch Event , Bogota, January 2006, Participation of the Colombian Ministry of National Education and the Ministery of Communication, Colciencias, Telecom Colombia and CLARA
- Congreso Nacional y Andino de Telecomunicaciones ANDICOM, Coordinación para emisión del evento por VideoConferencia, interacción con auditorios de diversas Universidades del país. Cartagena de Indias, Octubre 2006 y Octubre 2007.
- Participación en @LIS DAY, presentación del proyecto ALICE, Martha Giraldo, Directora Ejecutiva de RENATA. Desarrollo de video para presentación en el evento, Bogotá, Septiembre 2006.
- "Primer encuentro de visibilidad de la Cooperación Regional de la Unión Europea con América Latina, una oportunidad para todos!", Presentación proyectos ALICE, CLARA, RENATA. Desarrollo de video testimonial con Cathrin Stover. Martha Giraldo, Directora Ejecutiva de RENATA, Bogotá, Noviembre 2007.
- "Comité Universidad – Empresa", Presentación del proyecto RENATA al comité técnico. Bogotá, Septiembre, 2007.
- Organización de la reunión técnica e institucional del Proyecto ALICE, Asamblea red CLARA, Curso de Enrutamiento Avanzado, Bogotá, Junio 2007.
- "Calidad en e-learning, Estado del Arte y Perspectivas", Participación en el seminario internacional organizado por el Ministerio de Educación, Martha Giraldo, RENATA, Bogotá, Agosto 2007.

Corea:
- Asian Pacific Advanced Network meeting, August 2003, Korea

Costa Rica:
- Grids en Latinoamérica. GRIDtoday VIP Summit Latin America, San José, Costa Rica, Febrero de 2005

Czech Republic:
- Customer Empowered Fibre Networks Workshop, Prague, Czech Republic, September 2007

Dominican Republic:
- VirtualEduca – Caribe, Sto. Domingo, Dominican Republic, April 2006

Ecuador:
- @LIS Concertation Meeting, Quito, Ecuador, March 2004
- TICS and Higher Education, Leonidas Ortega Foundation, Guayaquil, Ecuador, July 2004
- Camara de Comercio Ecuatoriano, Conference on Advanced Networks, Guayaquil, Ecuador, February 2004
- ICT and Outreach, "Feria de Proyectos", Espol, Guayaquil, Ecuador, October 2004
- Telecommunications in Higher Education Forum, ESPE, Quito, Ecuador, December 2004
- Advanced Routing Training, Cuenca, January 2006
- Researchers meeting in ESPOL, Ecuador, October 2005
- Researchers meeting in ESPOCH and UNACH, Riobamba, Ecuador, October 2005.

- @lis meeting Quito, Ecuador, October 2005
- IEEE meeting, Guayaquil, Ecuador, October 2005
- Internet Forum, Expoplaza, Guayaquil, Ecuador, November 2005
- Researchers meeting EPN, Quito, Ecuador, June 2006
- "International Workshop on Advance Networks", Cuenca, Ecuador, Enero 2006
- "Nationals workshop on Advance Networks Basics, " Guayaquil and Quito, Ecuador, Enero 2006
- "WALC2006 y Lanzamiento de red CEDIA", Quito, Ecuador, junio 2006
- "CLARA Assembly, Virtual Meeting", April 2007.
- "Primera Cumbre Peruana de IPV6, la Nueva Generación del Internet", Virtual Conference, May 2007.
- "Día Mundial de las Telecomunicaciones y Sociedad de la Información: Seminario Ecuador 2007", Escuela Politécnica Nacional, Quito, Ecuador, May 2007.
- "Virtual Meeting with ETS-Cánada: Looking for Cooperation in Virtual Labs", May 2007.
- "Virutal Meeting with CLARATEC members: DNS management" , June 2007.
- "Primer Foro Virtual de Comunidades Ecuatorianas Para la Investigación", Ecuador, July 2007.
- "1st Virtual Forum of Global Research Communities", July 2007.
- "CEDIA Board Meeting", Riobamba, Ecuador, July 2007
- " Virtual Meetings Group II Project BID-CLARA", several virtual meetings beginning on August 2007.
- "First Virtual CLARA-Tec Meeting", September 2007
- "Open Seminar on CLIMATE INFORMATION AND PREDICTION SERVICES (CLIPS)", Guayaquil, Ecuador, September 2007.
- "CEDIA Board Meeting", Loja , Ecuador, October 2007
- "Proceso de Implementación de Servicios de Internet Sobre IPV6 en Instituciones", Technical Workshop, Loja, Ecuador, November 2007

El Salvador:
- RAICES meeting, San Salvador, May 2005
- RAICES University presidents meeting, San Salvador, July 2005
- "Latin America and Caribean Country Gateways Network Workshop", San Salvador, El Salvador, November 2007

Germany:
- GÉANT –Access Port Managers Meeting, Germany, May 2004

Greece:
- TERENA Networking Conference, Crete, June 2004

Guatemala:
- ALICE Project Meeting. Ciudad Antigua, Guatemala, July 2005
- Conferencia de Centro de Estudios Superiores de la Defensa Nacional (CESDENA), Guatemala City, December 2005
- Seminar on Educational Leadership, Hotel Intercontinental, Guatemala City, March 2006
- de Ciencia y Tecnología – Secretaría Nacional de Ciencia y Tecnología, Guatemala City, March 2006
- Consejo de Educación Contínua y Actualización (CEDUCA) – Colegio de Ingenieros de Guatemala, April 2006
- Conferencia en Universidad del Valle de Guatemala branch in Sololá, Atitlán, May 2006
- Workshop on e-Education, Universidad Rafael Landívar, June 2006

Italy:
- TERENA Networking Conference, Catania, May 2006
- RINGrid project meeting, Sta. Marguerita Ligure, Italy, April 2007
- Third EELA Conference, Catania, Italy, December 2007

Latvia:
- ICT for an Inclusive Society, Riga, Latvia, June 2006

Mexico:
- CUDI Spring Member Meeting, Mexico, May 2004
- ICT and the Global University Workshop, organised by CINDA, Monterrey, Mexico, June 2004
- CUDI Fall Break, Mexico, October 2004
- 2nd Joint Technical Meeting of CLARA and the ALICE Project, Veracruz, Mexico, April 2005
- Reunión de Primavera CUDI, Veracruz, México, Abril de 2005
- Universidad Autónoma de Nayarit dentro de la Semana Cultural de Nayarit, Mayo de 2005
- Inauguración del enlace entre San Diego y Tijuana. Proyecto WHREN, en el marco de la Reunión Gobernadores de los estados Fronterizos de México y Estados Unidos, Torreón, Coahuila, Julio de 2005
- Reunion en la Universidad Autónoma de Querétaro, Julio de 2005
- CUDI Spring Meeting, Oaxaca, April 2006
- UNAM/Internet2/LA NRENs meeting, Mexico City, April 2006
- Dia Virtual de Matemáticas Mayas, Asistencia de Universidades Mexicanas y La Universidad del Valle de Guatemala,November 2006
- XV Encuentro Internacional de Educación a Distancia, Conferencia a Distancia España –Mexico, November 2006
- El Día Global de Información del Séptimo Programa Marco (FP7), Participación de 10 Universidades Mexicanas, Marzo 2007
- Workshop Laboratorios Compartidos, Participación de Universidades de Mexico, Venezuela e Instituto Tecnológico Centro americanno, May 2007

Netherlands:
- GEANT-Access Port Manager meeting, October 2003, Amsterdam
- GEANT-Access Port Manager meeting, February 2004, Amsterdam

Nicaragua:
- Technical meeting. RedRENIA, Managua, Nicaragua, March 2005
- Technical meeting. RedRENIA, Managua, Nicaragua, June 2005

Panama:
- Encuentro Sociedad de la Informacion en Panama (Ciudad del Saber), Panama, March 2004
- Lanzamiento de Internet2 en Panama, Panama, August 2004
- Workshop on Cyberinfrastructure for International Biodiversity Research Collaboration, City of Knowledge, Panama, January 2006
- NSF Workshop, Panama City, Panama, November 2007

Peru:
- ICT and Information Society Workshop organised by the "Comunidad Andina de Naciones", Lima, Peru March 2004
- EU-LAC Summit of the IS, July 2003
- 4° Evento Regional de NAPs de America Latina - NAPLA 2005 organizado por LACNIC, Lima, Peru, Junio 2005
- " Diversidad y usos de macroalgas marinas ", Videoconference organizad by Universidad Nacional Mayor de San Marcos, Perú, July 2007

Portugal:
- GÉANT -Access Port Manager meeting, Lisbon, October 2004
- Third @LIS Coordination Meeting, Lisbon, April 2006
- EU-LAC Summit of the Information Society, Lisbon, April 2006
- Reunión del programa eLAC2007, Lisbon, Abril de 2006

Slovenia:
- eChallenges, 2005, Ljubljana, October 2005
- GEANT2 – A Global Leader, Bled, March 2008

Spain:
- Conferencia Iberoamericana de Rectores y Responsables de Relaciones Internacionales, Spain, February 2004
- Reunión celebrada en Mérida, España para la elaboración del Proyecto EELA, Febrero de 2005
- Jornadas Tecnicas de RedIRIS, Logrono, October 2005
- EELA Kick-off Meeting, Madrid/Trujillo, January 2006
- Segundo Foro Iberamericano de Cooperacion sobre Formacion y Innovacion, Madrid, April 2006
- Quinto Conferencia Iberoamericana de Delegaciones Universitarias y Redes de Educacion Superior, Bilbao, June 2006

Switzerland:
- International Workshop on African Research & Education Networking, CERN, Geneva, September 2005

Tunisia:
- World Summit of the Information Society, Tunis, November 2005
- ECLAC Meeting on eLAC2007, Tunis, November 2005

Venzuela:
- Seminario REACCIUN2, Venezuela, March 2004
- Workshop de América Latina y el Caribe - WALC 2005, Mérida, Venezuela, Julio 2005
- Advanced Routing Training, Caracas, September 2005
- ALICE/CLARA Technical Meeting, Caracas, October 2005
- REACCIUN2 Launch Event, Caracas, January 2006
- eHEALTH Conference , Caracas, May 2006

USA:
- Internet2 fall meeting, October 2003, USA
- Asian Pacific Advanced Network meeting, January 2004, Hawaii
- Internet2 Spring Member Meeting, April 2004, USA
- Internet2 Fall Member Meeting, September 2004, USA
- Conferencia Anual de CENIC, Los Angeles, California, Marzo de 2005
- Reunión de Primavera 2005 de Internet2, UCAID, Arlington, VA., Mayo de 2005
- XXXV Asamblea General de la OEA, Fort Lauderdale, Florida, Junio de 2005
- Internet2 Fall Meeting, Philadelphia, September 2005
- Internet2 Spring Meeting, Arlington, April 2006

United Kingdom:
- ENPG Meeting, UK, October 2004

Uruguay:
- CLARA IPv6 Tour, Montevideo, August 2005
- ALICE Project Meeting, Montevideo, November 2005
- RAU2 Launch Event, Montevideo, November 2005, Salón de Actos de la Presidencia de la República, Participation of Minister of Education and Culture and the Head of the EC Delegation in Montevideo, CLARA and many LA-NRENs. Presentation of collaborative projects between Europe and Uruguay and between Latin American countries and Uruguay via RedCLARA. http://www.rau.edu.uy/redavanzad/inauguracion/

Presentations made during the period (where / who to / when)

Argentina:
- Jornadas de la Asociación Argentina por el Avance de la Ciencia, presentation by Florencio Utreras, REUNA, November 2004, Argentina
- "Advanced Networks in Latin America: Deploying IPv6", GAC Regional Forum - ICANN, Guillermo Cicileo, Mar del Plata, Argentina, Abril 2005
- "Advanced Networks in Latin America and Argentina: available infrastructure", Panamerican Advanced Studies Institute - PASI 2005, Guillermo Cicileo, Mendoza, Argentina, Mayo 2005.
- "IPv6 en CLARA", IPv6 Tour, Guillermo Cicileo, Buenos Aires, Argentina, Agosto 2005.
- "Impacto de la Tecnología: ¿Hacia una e-Universidad?", ORUS Event, Florencio Utreras, Buenos Aires, Argentina, July 2005
- "IPv6 en CLARA", CLARA IPv6 Tour, Guillermo Cicileo (RETINA), Buenos Aires, Argentina, August 2005
- "CLARA/ALICE: la Red de Investigacion y Educacion de America Latina", Segundo Taller @LIS, Guillermo Cicileo (RETINA), Buenos Aires, Argentina, December 2005
- "RedCLARA - 2007/2008 Perspectives", 5th EELA Workshop, La Plata (AR), Eriko Porto – March 2007

Australia:
- Asian Pacific Advanced Network meeting, presentation by David West, DANTE, July 2004, Australia

Belgium:
- Global IPv6 Launch Event, presentation by Sandra Jaque, REUNA, January 2004, Brussels
- "EC Support to Research and Education Networking in Southern and Eastern Africa - Extending the reach of GEANT", Brussels Workshop on African Connectivity, Dai Davies (DANTE), March 2006

Brazil:
- Latin American Network Operations and Management Symposium 2003, presentations by Marian Garcia, DANTE and Michael Stanton, RNP, September 2003, Brazil
- EU-LAC Summit of the IS, presentation by Florencio Utreras, REUNA, November 2004, Rio de Janeiro, Brazil
- EU-LAC Summit of the IS, presentation by Dai Davies, DANTE, November 2004, Rio de Janeiro, Brazil
- EU-LAC Summit of the IS, address by Nelson Simoes, CLARA, November 2004, Rio de Janeiro, Brazil
- EU-LAC Summit of the IS, address by Dai Davies, DANTE, November 2004, Rio de Janeiro, Brazil
- "Computational Grids: the contribution of RNP", III Workshop on Computational Grids and Applications, LNCC, Petrópolis, RJ, Brazil, Michael Stanton, January 2005.
- "Computational Grids: the contribution of RNP", Reunião Temática: GRADEUFRGS, Porto Alegre, RS, Brazil, Michael Stanton, March 2005.
- "Expansão e modernização da rede da RNP", Companies of the Eletrobrás group, Brasília, DF, Brasil, Michael Stanton, March 2005.
- "Brazilian connectivity for e-Science", International meeting on High-Energy Physics, UERJ, Rio de Janeiro, RJ, Brazil, Michael Stanton, May 2005.
- "Expansão e modernização da rede da RNP", FAPERJ/Rede Rio, Rio de Janeiro, RJ, Brazil, Michael Stanton, June 2005.
- "Expansão e modernização da infra-estrutura de rede da RNP", Medical Sciences/UERJ, Rio de Janeiro, RJ, Brazil, June 2005.
- "Rede CLARA: Novas conexões internacionais", WRNP: Sexto Workshop RNP - Fortaleza - BR, Eriko Porto, May 2005

- "Expansão e modernização da rede da RNP", IAG-USP (Instituto de Astrofísica e Geofísica, U. of S. Paulo, Michael Stanton (RNP), São Paulo, Brazil, September 2005
- "Redes para Pesquisa e Educação", Workshop on Virtual Observatories, INPE (Instituto Nacional de Pesquisas Espaciais), Michael Stanton (RNP), São José dos Campos, Brazil, October 2005
- "Networking for Research and Education in Brazil", FCM/UERJ (Faculdade de Ciências Médicas, U. do Estado do Rio de Janeiro), Michael Stanton (RNP), Rio de Janeiro, October 2005
- "CLARA: past, present and future", EELA Workshop, Michael Stanton (RNP), Itacuruçá, Brazil, June 2006
- "CLARA-NOC", RNP Workshop, Hans-Ludwig Reyes (CLARA), Curitiba, May 2006
- "GEANT2, JRA1 and PerfSonar", RNP Workshop, Loukik Kudarimoti (DANTE), Curitiba, May 2006
- 1° Workshop BRAVO (Brazilian Virtual Observatory), São José dos Campos, SP, Brazil, February 2007
- LA Grid 07, Rio de Janeiro, RJ, Brazil, May 2007
- Second EELA Conference (jointly with BELIEF project), Rio de Janeiro, Brazil June 2007
- LANOMS 2007, Petrópolis, RJ, Brazil, September 2007
- "Infra-estrutura para e-Ciência no Brasil", XXVII Encontro Nacional de Física de Partículas e Campos, Michael Stanton (RNP), Águas de Lindóia, SP, Brazil, September 2006
- "Infra-estrutura para e-Ciência no Brasil", 1º Workshop BRAVO (Brazilian Virtual Observatory), Michael Stanton (RNP), São José dos Campos, SP, Brazil, February 2007
- "Infra-estrutura para e-Ciência no Brasil", SINAPAD (Sistema Nacional de processamento de Alto Desempenho) – Conselho de Coordenação, Michael Stanton (RNP), Rio de Janeiro, RJ, Brazil, May 2007
- "The Current Situation and Perspectives for e-Science in Latin América", LA Grid 07, Michael Stanton (RNP), Rio de Janeiro, RJ, Brazil, May 2007
- "Cyberinfrastructure and e-science applications in Latin America", LANOMS 2007, Michael Stanton (RNP), LNCC, Petrópolis, RJ, Brazil, September 2007
- "RedCLARA - 2007/2008", perfSONAR workshop, Salvador (BR), Eriko Porto – May 2007

Bolivia:
- CLEI 2003, presentation by Michael Stanton, RNP, September 2003, Bolivia
- Latin American Network Conference 2003, presentation by Michael Stanton, RNP, October 2003, Bolivia
- "RedCLARA - 2007/2008", Día del Internet y Lanzamiento oficial del Proyecto Clara en Bolivia, La Paz (BO), Eriko Porto – May 2007

Chile:
- Universidad Austral de Valdivia, presentation by Florencio Utreras, REUNA, March 2004, Chile,
- Telecomm Summit, Santiago de Chile, presentation by Florencio Utreras, REUNA, April 2004
- Universidad Santa Maria, Valparaiso, presentation by Florencio Utreras, May 2004, Chile
- Encuentro "Ciencia, Cultura e Innovación sobre Redes Avanzadas", Santiago, Chile, presentation by Florencio Utreras, REUNA, May 2004, Chile
- IV Encuentro Internacional de Ciencia, Cultura y Educación sobre la Red Mundial de Investigación y Desarrollo, presentation by Victor Castelo, May 2004, Chile
- Universidad Santa Maria, Valparaiso, presentation by Florencio Utreras, May 2004, Chile
- Encuentro "Ciencia, Cultura e Innovación sobre Redes Avanzadas", Santiago, Chile, presentation by Florencio Utreras, REUNA, May 2004, Chile
- IV Encuentro Internacional de Ciencia, Cultura y Educación sobre la Red Mundial de Investigación y Desarrollo, presentation by Victor Castelo, May 2004, Chile
- Evento de Lanzamiento de RedCLARA en Chile, CONICYT, Santiago, presentation by Florencio Utreras, REUNA, October 2004, Chile
- Universidad Diego Portales, presentation by Florencio Utreras, REUNA, October 2004, Chile
- GDLN Seminar on Advanced Networks vía Red GDLN, presentation by Florencio Utreras, REUNA, October 2004, Chile
- Seminario Comisión Europea en Valdivia, presentation by Florencio Utreras, REUNA, October 2004, Chile

- Jornadas de la Sociedad Chilena de Ciencias de la Computación, Arica, Chile, presentation by Florencio Utreras, REUNA, November 2004, Chile
- Universidad UNIACC, presentation by Florencio Utreras, REUNA, November 2004, Chile
- "RedCLARA El Futuro en Marcha de las Redes de Investigación y Educación de América Latina",Cisco Networking Solutions Forum 2005, Claudia Inostroza (REUNA), Viña del Mar, Chile, 2 June 2005
- "Internet de Nueva Generación y su Impacto en la Universidad", Universidad Católica de la Santísima Concepción, Florencio Utreras, Concepción, Chile, May, 2005
- "REUNA, Redes para la Colaboración e Innovación en Ciencia, Tecnología y Educación", Seminario de la Comisión de Cooperación Internacional del Consejo Rectores Universidades de Chilenas, Gonzalo Paredes (REUNA), Santiago, Chile, November 2005
- "REUNA, Redes para la Colaboración e Innovación en Ciencia y Educación", Lanzamiento incorporación Univ. Católica de Temuco a REUNA, Paola Arellano Toro (REUNA), Chile, March 2006
- "Redes Académicas Avanzadas como Plataformas para Colaboración", Seminario Uso de Tecnologías de Información en Docencia- Centro Eventos CENI casa central, Paola Arellano Toro (REUNA) Universidad de Santiago de Chile, April 2006
- "Usos Redes Académicas Avanzadas", Asamblea Ordinaria de Socios de REUNA, Paola Arellano Toro (REUNA), Chile, April 2006
- "Networking for Research and Education in Brazil", visit to CTIO (Cerro Tololo Interuniversity Observatory), Michael Stanton (RNP), La Serena, Chile, September 2006

Colombia:
- "RedCLARA El Futuro en Marcha de las Redes de Investigación y Educación de América Latina", RedCauca Launch Event, Florencio Utreras, Popayán (vía VC), Colombia, June, 2005
- "ALICE/CLARA Una Oportunidad de Desarrollo para América Latina", Presentación via VC en Lanzamiento de RENATA, Florencio Utreras (CLARA), January 2006
- "ALICE-CLARA-RENATA", Primera reunion técnica proyecto "Identificación de redes internacionales de investigación al interior de la red Scienti", bajo el marco "Fomento a la apropiación de la red Scienti en merica Latina y elCaribe", Martha I.Giraldo, Directora Ejecutiva de RENATA, Bogotá, Colombia, Octubre, 2007.
- "Las Redes académicas avanzadas, RENATA", lanzamiento sala virtual ATENEA, Universidad del Cauca, Popayán, Colombia, Noviembre 2007.
- "Strategies for Open and permanent Access to Scientific Information in America Latina", Atibaia, Brasil, Martha Giraldo en representación de CLARA
- "RENATA", Presentación en CENICAFE, Centro Nacional de Investigaciones del Café, Chinchiná, Manizales, Martha I.Giraldo, Directora Ejecutiva de RENATA, Febrero 2007.
- "RENATA" – Presentación en reunión de Centros de Investigación, Colciencias, Martha Giraldo, Directora Ejecutiva de RENATA, Colombia, Octubre 2007.
- RENATA – Presentación al Consejo Editorial de Universia, Martha I.Giraldo, Directora Ejecutiva de RENATA, Mayo 2007.
- "RENATA" – Presentación al Centro Regional de Educación Superior CRES de Occidente, Martha I.Giraldo, Directora Ejecutiva de RENATA, Junio 7 de 2007
- "RedCLARA - 2007/2008", 6th CLARA Technical Meeting, Bogota (CO), Eriko Porto – June 2007
- "Plan de Trabajo del NEG", ALICE Meeting, Bogota (CO), Eriko Porto – June 2007

Corea:
- Asian Pacific Advanced Network meeting, presentation by David West, DANTE, August 2003, Corea
- "Cyber Performing from South America to the World", Maria Jose Lopez, REUNA, International Symposium Culture Technology 2007, Seoul, June 2007

Costa Rica:

- "Conectividad de los miembros de CLARA en América Latina", Presentación dentro de la mesa redonda: Grids en Latinoamérica. GRIDtoday VIP Summit Latin America, San José, Costa Rica, Fernando Muro, Febrero de 2005
- "RedCLARA La Red de Investigación, Desarrollo y Educación de América Latina", Florencio Utreras, Ministerio de Ciencia y Tecnología de Costa RICA (CENAT), Florencio Utreras, San José, Costa Rica, July, 2005

Czech Republic:
- "Update on ALICE project", DANTE, GEANT APM Meeting, Prague, Czech Republic, February 2005
- "Optical Networking in Brazil: Research, Development, Innovation and deployment", Customer Empowered Fibre Networks Workshop, Michael Stanton (RNP), Prague, Czech Republic, September 2007

Dominican Republic:
- "RedCLARA", VirtualEduca – Caribe, Luis R. Furlán (RAGIE), Sto. Domingo, Dominican Republic, April 2006

Ecuador:
- Camara de Comercio Ecuatoriano, Conference on Advanced Research Networks, presentation by Enrique Pelaez, CEDIA, February 2004, Ecuador
- @LIS Programme Meeting, three presentations by Cathrin Stover, DANTE, March 2004, Quito, Ecuador
- ICT and Information Society Workshop, organised by the "Comunidad Andina de Naciones", presentation by Enrique Pelaez, CEDIA, March 2004, Ecuador
- Jornadas de informatica y Telecomunicaciones, Universidad Central de Ecuador, presentation by Carlos Travez, Fundacyt, March 2004, Ecuador
- Pontifica Universidad Catolica del Ecuador, presentation by Carlos Travez, Fundacyt, March 2004, Ecuador
- Universidad de Guayaquil, presentation by Enrique Pelaez, CEDIA, May 2004, Ecuador
- Universidad Espiritu Santo, presentation by Enrique Pelaez, CEDIA, May 2004, Ecuador
- Universidad Tecnica Empresarial de Guayaquil, presentation by Enrique Pelaez, CEDIA, May 2004, Ecuador
- Universidad Laica Vicente Rocafuerte de Guayaquil, presentation by Enrique Pelaez, CEDIA, June 2004, Ecuador
- TICS and Higher Education, presentation by Enrique Pelaez, CEDIA, July 2004, Ecuador
- Universidad Estatal de Bolivar, presentation by Carlos Travez, Fundacyt, July 2004, Ecuador
- Universidad Catolica Santiago de Guayaquil, presentation by Enrique Pelaez, CEDIA, August 2004, Ecuador
- TLC Negotiation Meeting, Consejo Nacional de Competitividad, presentation by Carlos Travez, Fundacyt, September 2004, Ecuador
- Universidad Tecnica de Ambato, presentation by Carlos Travez, Fundacyt, September 2004, Ecuador
- ICT and Outreach, Feria de Proyectos, ESPOL, presentation by Enrique Pelaez, CEDIA, October 2004, Ecuador
- National Competitive Council, presentation by Enrique Pelaez, CEDIA, October 2004, Ecuador
- XXIII Feria CompuQuito, presentation by Carlos Travez, Fundacyt, October 2004, Ecuador
- SENACYT/FUNDACYT, presentation by Carlos Travez, Fundacyt, October 2004, Ecuador
- INTEL-CONATEL, presentation by Carlos Travez, Fundacyt, October 2004, Ecuador
- Vigilancia Tecnologia e Inteligencia Competitiva, presentation by Carlos Travez, Fundacyt, November 2004, Ecuador
- Telecommunications in Higher Education Forum, ESPE, presentation by Enrique Pelaez and Carlos Travez, CDEIA/FUNDACYT, December 2004, Ecuador
- Indicadores de Ciencia y Tecnoligia, Workshop OEA, presentation by Carlos Travez, Fundacyt, December 2004, Ecuador
- Universidad Tecnica Particular de Loja, presentation by Enrique Pelaez, Marcelo Jaramilla, CEDIA and Carlos Travez, Fundacyt, December 2004, Ecuador

- Universidad San Francisco de Quito, presentation by Marcelo Jaramillo, CEDIA, December 2004, Ecuador
- "RedCLARA El Futuro en Marcha de las Redes de Investigación y Educación de América Latina", Universidad Técnica Particular de Loja, Florencio Utreras, Loja, Ecuador, April, 2005
- "RedCLARA El Futuro en Marcha de las Redes de Investigación y Educación de América Latina", Universidad Central, Florencio Utreras, Quito, Ecuador, April, 2005
- "RedCLARA Connections and Services", Advanced Routing Training, Eriko Porto (CLARA), Cuenca, January 2006
- "CLARA-NOC", Advanced Routing Training, Hans-Ludwig Reyes (CLARA), Cuenca, January 2006
- "RedCLARA: La Red Latinoamericana para la Ciencia, la Educación y la Innovación" via VC, presentación a Escuela Politécnica Nacional, Rocio Cos (CLARA), Quito, June 2006
- "Advance Academic Networks, CEDIA and CLARA", Pontificia Universidad Católica de Ibarra, Enrique Peláez (CEDIA), Ibarra, Ecuador, October 2005
- "Advance Academic Networks, CEDIA and CLARA", Researchers meeting in ESPOL, Enrique Peláez (CEDIA), Ecuador, October 2005
- "Advance Academic Networks, CEDIA and CLARA", Researchers meeting in ESPOCH and UNACH, Enrique Peláez (CEDIA), Riobamba, Ecuador, October 2005
- "The ALICE Project, RedCLARA and CEDIA", @lis meeting, Enrique Peláez (CEDIA), Quito, Ecuador, October 2005
- "CEDIA, CLARA and the advance academic networks in the region", IEEE meeting, Enrique Peláez (CEDIA), Guayaquil, Ecuador, October 2005
- "Advance Networks, CEDIA – the Ecuadorian case", Internet Forum, Expoplaza, Enrique Peláez (CEDIA), Guayaquil, Ecuador, November 2005
- "Advance Academic Networks, CEDIA and CLARA", Pontificia Universidad Católica de Santo Domingo, Enrique Peláez(CEDIA), santo Domingo, Ecuador, November 2005
- "Advance Academic Networks", Researchers ESPOCH, Enrique Peláez (CEDIA), Riobamba, Ecuador, February 2006
- "Advance Academic Networks, CEDIA and CLARA", PC Magazine, Enrique Peláez (CEDIA) Ecuador, February 2006
- "Advance Academic Networks, CEDIA and CLARA", Universidad Estatal de Guayaquil, Enrique Peláez (CEDIA), Guayaquil, Ecuador, February 2006
- "Advance Academic Networks, CEDIA and CLARA", Universidad de Israel, Enrique Peláez (CEDIA), Quito, Ecuador, February 2006
- "Advance Academic Networks, CEDIA and CLARA", Directors of the National Institute of Fishing – INP, Enrique Peláez (CEDIA), Guayaquil, Ecuador, March 2006
- "Advance Academic Networks, CEDIA and CLARA", Researchers at the National Institute of Fishing – INP, Enrique Peláez (CEDIA), Guayaquil, Ecuador, April 2006
- "Advance Academic Networks, CEDIA and CLARA", ESPE, Enrique Peláez (CEDIA), Quito, Ecuador, May 2006
- "Advance Academic Networks, CEDIA and CLARA", Directors of the International Research Centre for the El Niño Phenomenon – CIIFEN, Enrique Peláez (CEDIA), Guayaquil, Ecuador, May 2006
- "Advance Academic Networks, CEDIA and CLARA", Researchers meeting, EPN, Enrique Peláez (CEDIA), Quito, Ecuador, June 2006
- "Advance Networks and CEDIA", Conference, Escuela Politécnica de Chimborazo, Enrique Pelaez, Ecuador, Febrero 2006
- "Advance Networks and CEDIA" Conference, Universidad Estatal de Guayaquil, Enrique Pelaez, Ecuador, Febrero 2006
- "Advance Networks and CEDIA" Conference, Universidad de Israel, Enrique Pelaez, Ecuador, Febrero 2006
- "Advance Networks and CEDIA" Conference, San Antonio de Machala, Enrique Pelaez, Ecuador, Marzo 2006
- "Advance Networks and CEDIA" Conference, Escuela Politecnica Nacional, Enrique Pelaez, Ecuador, Junio 2006
- "Advance Networks and CEDIA" @lis day, Escuela Politecnica Nacional , Enrique Pelaez, Ecuador, Septiembre 2006

- "Advance Networks and CEDIA" Conference, Pontificia Universidad Católica del Ecuador, Enrique Pelaez, Ecuador, Octubre 2006
- "Advance Networks and CEDIA" Launch Regie Advance Network , Video Conference, Enrique Pelaez, Ecuador, Noviembre 2006
- "Advance Networks and CEDIA" Cisco Conference, Universidad Estatal de Guayaquil, Enrique Pelaez, Ecuador, Diciembre 2006
- "Advance Networks and CEDIA" Conference, ICM-Escuela Superior Politécnica del Litoral, Enrique Pelaez, Ecuador, Diciembre 2006
- "Advance Networks and CEDIA" Conference, Universidad Estatal de Milagro, Enrique Pelaez, Ecuador, Enero 2007
- "Redes Académicas Avanzadas: Consorcio Ecuatoriano para el Desarrollo de Internet Avanzado – CEDIA, Colaboración Latino Americana de Redes Avanzadas – CLARA", Conference oriented to the research group of the Oceanographic Institute of the Ecuadorian Army (INOCAR), Enrique Peláez, Guayaquil - Ecuador, April 2007.
- "Redes Académicas Avanzadas – Internet 2 y el Consorcio Ecuatoriano para el Desarrollo de Internet Avanzado – CEDIA", CISCO Academy Day, Carlos Monsalve, Guaranda – Ecuador, May 2007.
- "Redes Académicas Avanzadas: Consorcio Ecuatoriano para el Desarrollo de Internet Avanzado – CEDIA", Virtual Conference for research teams of the Universidad Nacional de Milagro (UNEMI), Carlos Monsalve, Milagro - Ecuador, May 2007.
- "La Educación y la Investigación en la Sociedad de la Información", Día Mundial de las Telecomunicaciones y Sociedad de la Información: Seminario Ecuador 2007, Carlos Monsalve, Quito, Ecuador, May 2007.
- "Las Redes Académicas Avanzadas, CEDIA: Caso Ecuador", Foro de Conectividad y Emprendimiento, ISTEC General Assembly, Loja-Ecuador, Carlos Monsalve, June 2007.
- "Redes Académicas Avanzadas: Consorcio Ecuatoriano para el Desarrollo de Internet Avanzado – CEDIA", Videoconference oriented to research teams from the Catholic University of Ibarra (PUCESI), Carlos Monsalve, Ibarra - Ecuador, June 2007.
- "Redes Académicas Avanzadas: Consorcio Ecuatoriano para el Desarrollo de Internet Avanzado – CEDIA", Conference oriented to research teams from the Universidad Técnica del Norte (UTN), Carlos Monsalve, Ibarra - Ecuador, June 2007.
- "La Red Académica Avanzada CEDIA y las Ramas IEEE del Ecuador", IEEE Nacional IEEE Branches Meeting, Carlos Monsalve, Quito-Ecuador, August 2007.
- "RedCLARA Rollout", 4th CLARA Technical Meeting, Quito (EC), Eriko Porto – July 2006
- "Plan de Ingeniería para el NEG", ALICE Meeting, Quito (EC), Eriko Porto – July 2006
- "Research Networks and Digital Inclusion", Cathrin Stöver, Organisacion Universitaria Interamericana, Lojas, March 2007

El Salvador:
- Foro Univ. Tecnológica UTEC, presentation by Rafael Ibarra, RAICES, April 2004, El Salvador
- Mercadeo por Internet", sponsored by elsalvador.com, presentation by Rafael Ibarra, August 2004, El Salvador
- IT professional day, Banco Central de Reserva de El Salvador, presentation by Rafael Ibarra, RAICES, October 2004, El Salvador
- 75 Aniversario ASIA (asoc. Salv. de Ingenieros y Arquitectos), presentation by Rafael Ibarra, November 2004, El Salvador
- "El uso de las TIC en los diferentes niveles educativos". IV Congreso pedagógico Alfa. San Salvador, Abril de 2005.
- "Internet como instrumento esencial para la investigación del profesional de Ciencia Económicas". Universidad Pedagógica de El Salvador. Rafael Ibarra. San Salvador, Mayo 2005.
- "Proyecto de Internet 2", Instituto Tecnológico Centroamericano, Reyna Alvarado (ITCA), January 2006
- "Informe de Equipo Técnico", Universidad Centroamericana José Simeón Cañas, Reyna Alvarado (ITCA), March 2006
- "Redes Avanzadas Desafíos y Oportunidades", Academic Council, Universidad Don Bosco, Carlos Bran (RAICES), April 2006

- "Topologías de coexistencia del Internet público y el Internet avanzado", Universidad Don Bosco, Carlos Bran (RAICES), May 2006
- "RedCLARA", II Ministerial Meeting for the Information Society in Latin America and the Caribbean, given by Ida Holz, in San Salvador, February 7, 2008
- "Internet in El Salvador: Advances and Perspectives", Universidad Centroamericana José Simeón Cañas, given by Rafael Ibarra in Antiguo Cuscatlán, El Salvador, November 2007
- "Salvadorean Strategy towards Knowledge Society", Universidad Gerardo Barrios, given by Rafael Ibarra in Usulután, El Salvador, October 2007
- "ICT usage in teaching at Universidad Centroamericana José Simeón Cañas", General Meeting of Jesuit Universities in Latin America, given by Rafael Ibarra at Universidad Javeriana, Bogotá, Colombia, September 2007
- "RAICES: Red Avanzada de Investigación, Ciencia y Educación Salvadoreña. General Presentation", Ordinary meeting of the University Superior Council, Universidad de El Salvador, given by Rafael Ibarra in San Salvador, El Salvador, August 2007
- "The future of Advanced Networks and their Applications", 37th Anniversary of Instituto Tecnológico Centroamericano (ITCA), given by Rafael Ibarra in Santa Tecla, El Salvador, October 2006
- "RedCLARA Rollout", 5th CLARA Technical Meeting, San Salvador (ES), Eriko Porto – November 2006
- "Plan de Trabajo del NEG", ALICE Meeting, San Salvador (ES), Eriko Porto – November 2006

Ghana:
- "Driving Latin American Research and Education", Cathrin Stöver, Association of African Universities Conference, Accra, November 2006

Germany:
- GÉANT -Access Port Manager meeting, presentation by Marian Garcia, DANTE, May 2004, Berlin

Greece:
- TERENA Networking Conference, presentation by Florencio Utreras, CLARA, June 2004, Crete

Guatemala:
- "Next Generation Internet in Guatemala", Centro de Estudios Superiores de la Defensa Nacional (CESDENA), Luis R. Furlán (RAGIE), Guatemala City, December 2005
- "Next Generation Internet and Education", Seminar on Educational Leadership, Hotel Intercontinental, Luis R. Furlán (RAGIE), Guatemala City, March 2006
- "Achievements of Guatemalan Talent in Information Technology", Semana de Ciencia y Tecnología – Secretaría Nacional de Ciencia y Tecnología, Mario E. Sosa and Luis R. Furlán (RAGIE), Guatemala City, March 2006
- "RAGIE and the Next Generation of Internet", Consejo de Educación Contínua y Actualización (CEDUCA) – Colegio de Ingenieros de Guatemala, Mario E. Sosa and Ivan Morales (RAGIE), April 2006
- "ITC in Education", Universidad del Valle de Guatemala branch in Sololá, Atitlán, Luis R. Furlán (RAGIE), May 2006
- "Examples and potential capacities of e- Education", Workshop on e-Education, Universidad Rafael Landívar, Luis R. Furlán (RAGIE), June 2006
- "ALICE/CLARA: Una Oportunidad de Desarrollo para América Latina", Preparatory meeting in the planning of the Caribbean Knowledge and Learning Network (CKLN), Santo Domingo, Dominican Republic, Luis R. Furlán (RAGIE - UVG), April, 2006
- "Internet de Segunda Generación", Semana de Ciencia y Tecnología, Universidad Tecnológica, San Pedro Sula, Honduras, Luis R. Furlán (RAGIE – UVG), December, 2006
- "The Importance of Advanced Networks to Digital Libraries", Caribbean Digital Libraries Workshop/UNESCO, Port Of Spain, Trinidad, Luis R. Furlán (RAGIE - UVG), July, 2007
- "Redes Avanzadas de Investigación y Educación y sus Aplicaciones", VII Congreso de Estudiantes de Ingeniería y Sistemas (COECyS), Guatemala City, Luis R. Furlán (RAGIE - UVG), September, 2007

-   "Descripción de la Red Nacional RAGIE de Guatemala", Curso Sobre Tecnologías GRID Aplicadas al Clima y a la Biomedicina/13th EELA Tutorial, Antigua, Guatemala, Luis R. Furlán (RAGIE - UVG), October, 2007
-   "Avances del Proyecto RAGIE para los programas regionales de América Latina de la Comisión Europea: @lis y ALICE", Feria de la Cooperación (Comunidad Europea), Guatemala City, Nidia Giorgis (RAGIE - URL), November, 2007
-   "Las Redes de Siguiente Generación en Apoyo de las Bibliotecas Digitales", Semana Nacional de Ciencia y Tecnología e Innovación, Guatemala City, Luis R. Furlán (RAGIE - UVG), March, 2008

Italy:
-   "RedCLARA: integrating Latin America into global R&E networking", TERENA Networking Conference2006, Michael Stanton (RNP), Catania, Italy, May 2006
-   "Research Networking beyond Europe – a tool for world development", TERENA Networking Conference, David West (DANTE), Catania, Italy, May 2006
-   "Network support for e-Science in Latin America", Third EELA Conference, Michael Stanton (RNP), Catania, Italy, December 2007

Japan:
-   AccessNova Meeting, presentation by Florencio Utreras, REUNA, May 2004, Japan
-   "RedCLARA" in GEMNET Meeting via VC, NTT Symposium on Collaboration Technologies, Florencio Utreras (CLARA), Musashino, Japan, May 2006

Latvia:
-   "The Inclusive Information Society: A Global Perspective", ICT for an Inclusive Society, Dai Davies (DANTE), Riga, Latvia, June 2006

Luxembourg:
- "ALICE, Advances in Latin America", GEANT2 Launch Event, Florencio Utreras, Luxembourg, June 2005

Mexico:
-   CUDI Spring Break, presentation by Cathrin Stover, April 2004, Mexico
-   ICT and the Global University Workshop, organised by CINDA, presentation by Enrique Pelaez, CEDIA, June 2004, Mexico
-   CUDI Fall Break, presentation by Victor Castelo, October 2004, Mexico
-   "Actividades Técnicas de CLARA", 2nd Joint Technical Meeting of CLARA and the ALICE Project, Veracruz, Mexico, Michael Stanton, April 2005
-   "RedCLARA El Futuro en Marcha de las Redes de Investigación y Educación de América Latina" Evento de Primavera CUDI, Ida Holz (RAU), Veracruz, México, April 2005
-   "Descripción de CLARA", Presentación a la Universidad Autónoma de Nayarit dentro de la Semana Cultural de Nayarit, Fernando Muro, Mayo de 2005
-   "Descripción de la Situación Actual de Internet 2 en México y América Latina", Presentación a la Universidad Autónoma de Querétaro, José Antonio Ramírez, Fernando Muro, Julio de 2005
-   "Presentacion de Redes Avanzadas", Meeting UNAM/Internet2/LA-NRENs, hans-Ludwig Reyes (CLARA), Mexico City, April 2006
-   "Networking for Research and Education in Brazil", CUDI Spring Meeting, Michael Stanton (RNP), Oaxaca, Mexico, April 2006
-   "RedCLARA Una Oportunidad de Desarrollo para América Latina", Reunión de Primavera de CUDI, Rocio Cos (CLARA), Oaxaca, México, April, 2006
-   "Red CLARA , un sueño para la cooperación entre académicos y científicos hecho realidad", Conferencia de "Científicas Latinoamericana ", Ida Holz, Mexico City, Mexico, May 2006
-   Dia Virtual de Matemáticas Mayas, Asistencia de Universidades Mexicanas y La Universidad del Valle de Guatemala, Fernando Mgana, Mexico, November 2006
-   La Red Nacional para la Educación y la Investigación, Carlos Casasus, November 2006
-   XV Encuentro Internacional de Educación a Distancia, Conferencia a Distancia España –Mexico, Carmen Rodríguez Martinez, Directora General de Innovación Educativa de la Consejería de Educación de Andalucía, November 2006

- El Día Global de Información del Séptimo Programa Marco (FP7), Participación de 10 Universidades Mexicanas, Carlos Casasus, Marzo 2007
- Internet 2 en Mexico y en el mundo. Su impacto en las Universidades en el siglo XXI, Carlos Casasus, Presentación a la Universidad Católica Madre y Maestra, Santo Domingo, April 2007,
- Oportunidad de Colaboración con la Red CLARA, Rocio Cos, Oaxaca, April 2007
- CUDI: Situación Actual, Aplicaciones, Rocio Cos, Oaxaca, April 2007
- Las redes académicas en México y en el mundo, Carlos Casasus, Julio 2007
- Internet2, Carlos Casasus, September, 2007
- Internet2 in Mexico and Latin America, Fernando Muro, Día virtual en la Universidad Veracruzana, October 2007
- 8th EELA Workshop, Mexico City, Mexico, October 2007
- "Research & Education Networking in Brazil: the role of RNP", 8th EELA Workshop, Michael Stanton (RNP), Mexico City, Mexico, October 2007
- "Research Netwoprking without Boundaries", Cathrin Stöver, International ICFA Workshop on Digital Divide, Ciudad de Mexico, October 2007

Netherlands:
- GEANT-Access Port Manager meeting, presentation by Esther Robles, RedIRIS, October 2003, Amsterdam
- GEANT-Access Port Manager meeting, presentation by Esther Robles, RedIRIS, February 2004, Amsterdam

Nicaragua:
- UCC, Managua, presentation by Marvin Castaneda, RENIA, July 2004, Nicaragua
- UNAN, Managua, presentation by Carlos Casasus, CUDI, August 2004, Nicaragua
- UNAN Leon, presentation by Roberto Blandino, RENIA, October 2004, Nicaragua
- UCA, Managua, presentation by Enrique Silva, RENIA, October 2004, Nicaragua
- UNA, Managua, presentation by Marcos Carcamo, RENIA, November 2004, Nicaragua
- "Sociedad de la Información: Retos y oportunidades". EL@C International Conference. ICT for Local Development and Environmental Management. Roberto Blandino. Managua, Nicaragua, February 2005.
- "Conexión de Nicaragua a la Internet2: Posibilidades en la UNAN León" Roberto Blandino. León, Nicaragua, February 2005.
- "Tunel y enrutamiento 6to4 Linux-router", Universidad Nacional Autónoma de Managua, Peter Pettersson (Equipo Técnico RENIA/UNA), Managua, October 2005
- "Mecanismos de transición", Universidad Nacional Autónoma de Managua, Derman Zepeda (Equipo Técnico RENIA/UNAN), Managua, October 2005
- "Red Nicaragüense de Internet Avanzada – RENIA", III Seminario de Ingeniería, Diseño y Tecnología, Managua, Derman Zepeda (Equipo Técnico RENIA/UNAN), Managua, October 2005
- "Mecanismos de transición a IPv6: Tunnel 6 to 4 con equipos CISCO", IBW, Managua, Marvin Bonilla (Equipo Técnico RENIA/IBW), Managua, November 2005
- "Mecanismos de transición a IPv6: con equipos CISCO", IBW, Managua, Marvin Bonilla (Equipo Técnico RENIA/IBW), Managua, November 2005
- "Simulación Tunnel utilizando Cisco", Universidad Nacional Autónoma de Managua, Derman Zepeda (equipo Técnico RENIA/UNAN-Managua), Managua, December 2005.
- "Simulación Tunnel utilizando Linux Servers", Universidad Nacional Autónoma de Managua, Petter Peterson (equipo Técnico RENIA/UNA), Managua, December 2005
- "Introducción a IPv6", Universidad Nacional Autónoma de Managua, Derman Zepeda (equipo Técnico RENIA/UNAN-Managua), Managua, January 2006.
- "IBW Fibernet - Presentación sobre Oportunidades con Internet II", Roger Noguera, Managua, March 2006

Nigeria:
- " Strategic Planning in the research and education networking community: The CLARA Strategic Plan – Methodology and Results", Cathrin Stöver, Abuja, April 2007

Panama:
- Encuentro de Sociedad de la Información en Panamá (Ciudad del Saber), presentation by Florencio Utreras, REUNA, March 2004, Panama
- Lanzamiento de Internet2 en Panamá (SENACYT), presentation by Florencio Utreras, REUNA, August 2004, Panama
- "RedCLARA Una Oportunidad de Desarrollo para América Latina", SENACYT, Florencio Utreras, Panamá, March 2005
- "The ALICE Project and the RedCLARA Network", @LIS Programme Meeting, Cathrin Stover, Panama, May 2005
- "The Impact of ALICE", @LIS Programme Meeting, Nelson Simoes, Cathrin Stover, Panama, May 2005
- "ALICE &CLARA, Advances in Latin America", Workshop on Cyberinfrastructure for International Biodiversity Research Collaboration, Florencio Utreras (CLARA), City of Knowledge, Panama, January 2006
- "Research & Education Networking in Brazil: the role of RNP", NSF Workshop, Michael Stanton (RNP), Panama City, Panama, November 2007
- "CEDIA: Latest Developments", Alice Meeting, Carlos Monsalve, Panama City – Panama, November 2007.
- "Applications in Climate Change", Workshop on Applications of Cyberinfrastructure in Latin America, Jose Luis Santos, Panama City – Panama, November 2007.

- "RedCLARA – Reporte del NEG", 7th CLARA Technical Meeting, Panama (PA), Eriko Porto – November 2007
- "Plan de Trabajo del NEG", ALICE Meeting, Panama (PA), Eriko Porto – November 2007

Paraguay:
- "ALICE/CLARA Una Oportunidad de Desarrollo para América Latina", Presentación en la Universidad Nacional de Asuncion, Florencio Utreras (CLARA), December 2005.

Peru:
- EU-LAC Summit of the IS, presentation by Florencio Utreras, REUNA, July 2003, Peru
- "CLARA: la Red de Investigación y Educación de América Latina", 4° Evento Regional de NAPs de America Latina - NAPLA 2005, Guillermo Cicileo, Lima, Peru, Junio 2005.
- "Multicast e IPv6 en CLARA y RETINA", Tercer Foro Latinoamericano de IPv6 - FLIP6, Guillermo Cicileo, Lima, Peru, Junio 2005.
- "Las Redes de Investigación y Educación de América Latina", Evento PUC-GDLC, Florencio Utreras, Lima, Perú, July 2005
- Third EELA Workshop, Lima, Peru. January 2007

Poland:
- "Hybrid Networking in Latin America", CCIRN Meeting, Florencio Utreras, Poznan, Poland, June, 2005
- "Deployment of IPv6 in Latin America", CCIRN Meeting, Florencio Utreras, Poznan, Poland, June, 2005
- "Development of NRENs in Latin America", TERENA Networking Conference, Florencio Utreras, Poznan, Poland, June 2005
- "The ALICE Project and the RedCLARA Network", TERENA Networking Conference, Cathrin Stover, Poznan, Poland, June 2005

Portugal:
- GÉANT -Access Port Manager meeting, presentation by Ana Romero, DANTE, October 2004, Lisbon
- "Creating communities for Collaboration on RedCLARA" in e-Education Session of EU-LAC Summit of the Information Society, Florencio Utreras (CLARA), Lisbon, Portugal, April 2006
- "RedCLARA Una Oportunidad de Desarrollo para América Latina", eLAC2007 meeting, Florencio Utreras (CLARA), Lisbon, Portugal, April 2006

- "The ALICE Challenge – Building on Success", EU-LAC Summit of the Information Society, Dai Davies (DANTE), Lisbon, Portugal, April 2006
- "Three slides on ALICE", @LIS Coordination Meeting, Cathrin Stover (DANTE), Lisbon, April 2006

Romania:
- RINGrid project meeting, Iasi, Romania, September 2007

Slovenia:
- "ALICE &CLARA, Advances in Latin America", eChallenges 2005, Florencio Utreras (CLARA), Ljubljana, Slovenia, October 2005

Spain:
- Conferencia Iberoamericana de Rectores y Responsables de Relaciones Internacionales, presentation by Esther Robles, RedIRIS, February 2004, Spain
- "ALICE América Latina Inter Conectada con Europa", CampusRed Conference, Florencio Utreras, Bilbao, Spain, January 2005
- "RedCLARA Engineering", XVI Jornadas Tecnicas de RedIRIS, Eriko Porto (CLARA), Logrono, October 2005
- "Informe Anual de RedIRIS", XVI Jornadas Tecnicas de RedIRIS, Alberto Perez (Red.es), Esther Robles (RedIRIS), Diego Lopez (RedIRIS), Logrono, October 2005
- "Task 2.4: Network Support and Operation", EELA Kick-Off Meeting, Michael Sthanton (RNP), Madrid, January 2006
- "RedIRIS y las redes de investigación internacionales", Jornada de RedIRIS para redes de investigación autonómicas y entidades gestoras de puntos de presencia de RedIRIS, Alberto Pérez (Red.es), Madrid, May 2006
- "RedIRIS como ICTS", Jornada sobre Instalaciones Científico Tecnológicas Singulares (ICTS), Tomás de Miguel (RedIRIS), Madrid, June 2006
- "Driving Latin American Research and Education", Segundo Foro Iberamericano de Cooperacion sobre Formacion y Innovacion, Cathrin Stover (DANTE), Madrid, April 2006
- "Driving Latin American Research and Education", Quinto Conferencia Iberoamericana de Delegaciones Universitarias y Redes de Educacion Superior, Cathrin Stover (DANTE), Bilbao, June 2006

Sweden:
- "Red Nicaragüense de Internet Avanzada – RENIA", University of Lund, Roberto Blandino (RENIA), Lund, September 2005

Switzerland:
- "Establishing continental backbones -The DANTE/GEANT experience", CERN Africa workshop, Enzo Valente (GARR), September 2005
- "ALICE/CLARA, The Latin American Networking Initiative", International Workshop on African Research & Education Networking, CERN, Florencio Utreras (CLARA), Geneva, Switzerland, September 2005

Thailand:
- "ALICE Update", APAN Meeting, David West, January 2005

Tunisia:
- "ALICE/CLARA: The Latin American Experience", Past, Present and Future of Research in the Information Society, Florencio Utreras (CLARA), Tunis, November 2005
- "ALICE/CLARA: The Latin American Research and Education Network", ECLAC Meeting on eLAC2007, Florencio Utreras (CLARA), Tunis, November 2005
- "ALICE/CLARA: The Latin American Experience", Worldwide networking for research and education - extending the reach of GÉANT, Florencio Utreras (CLARA), Tunis, November 2005
- "Advance Academic Networks for Development, the Ecuadorian Case", World Summit of the Information Society, Enrique Peláez (CEDIA), Tunis, November 2005

- " GEANT2 in Europe", World Summit of the Information Society, David West (DANTE), Tunis, November 2005

UK:
- ENPG Meeting, presentation by Matthew Scott, DANTE, October 2004, UK
- "Update on ALICE project", DANTE, GEANT APM Meeting, Oxford, United Kingdom, June 2005

Uruguay:
- "Redes avanzadas en América Latina, proyectos ALICE , CLARA Y RAU2", Ida Holz, Comisión de Investigación Científica de la Universidad, May 2005
- "Redes avanzadas en América Latina, proyectos ALICE , CLARA Y RAU2", Ida Holz, Comité Interuniversitario del Uruguay, May 2005
- "Redes avanzadas en América Latina, proyectos ALICE , CLARA Y RAU2", Ida Holz, Comisión de Enseñanza de la Universidad de la República, May 2005
- "Redes avanzadas en América Latina, proyectos ALICE , CLARA Y RAU2", Ida Holz, Presentación en el Ministerio de Educación y Cultura con presencia del Ministro y el Director Nacional de Ciencia y Tecnología, Julio 2005
- "IPv6 en CLARA", IPv6 Tour, Guillermo Cicileo, Montevideo, Uruguay, Agosto 2005.
- "IPv6 en CLARA", CLARA IPv6 Tour, Guillermo Cicileo (RETINA), Montevideo, Uruguay, August 2005
- Conferencia a la Asociación de la Prensa ALICE-CLARA-REDCLARA, Ida Holz (RAU), Octubre de 2005
- "Conexión a la RedCLARA - Instalación 12 nodos de RAU2", Entrevista TV-Ciudad- audición "Los Bueyes Perdidos", Ida Holz (RAU), October 2005
- "Inauguración de RAU2 y la RedCLARA", Radio Interview, Ida Holz (RAU), November 2005

UAE:
- "Pan-European Research Networking", Cathrin Stöver, The UAE Forum in Information and Communication Technology Research, Abu Dhabi, May 2007

USA:
- I2 fall meeting, presentation by Dai Davies, DANTE, October 2003, USA
- Asian Pacific Advanced Network meeting, presentation by David West, DANTE, January 2004, Hawaii
- Presentación a Reunión Preparatoiria de Cumbre Americana de Ministros de Ciencia y Tecnología, presentation by Florencio Utreras, REUNA, September 2004, USA
- Lister Hill National Center for Biomedical Communications, National Library of Medicine, presentation by Carlos Travez, Fundacyt, September 2004, USA
- "CLARA Network", Winter 2005 ESCC/Internet2 Joint Techs workshop - Salt Lake City - US, Eriko Porto, February 2005
- "CEDIA an emerging NREN, the Ecuadorian Case", Internet2 Fall Meeting, Enrique Peláez (CEDIA), Philadelphia, September 2005
- "RedCLARA Progress", Internet2 Spring Meeting, Eriko Porto (CLARA), Arlinton, April 2006
- "Enabling E-Health Sciences through National Research and Education Networks", Internet2 Spring Meeting, Carlos Casasus (CUDI), Arlington, April 2006
- "The Current Situation and Perspectives for e-Science in Latin America", visit to National Center for Supercomputing Applications (NCSA), Iara Machado (RNP), Urbana-Champaign, USA, June 2007
- "European Research Networking and Global Research Networking Activities", Cathrin Stöver, Brown Bag Lunch, World Bank, Washington D.C., October 2006
- "GEANT2, NREN and Global Research Networking", Cathrin Stöver, DGLN Forum, World bank, Washinton D.C., October 2006
- "GEANT2 – an overview over the network and activities", Cathrin Stöver, Internet2 Fall Conference, San Diego, October 2007

- GEANT2 International Activities", Cathrin Stöver, Internet2 Fall Conference, San Diego, October 2007

Venezuela:
- Seminario REACCIUN2, presentation by Victor Castelo, CSIC, March 2004, Venezuela
- Evento "INternet2 y la UCV" (vía VC), presentation by Florencio Utreras, REUNA, December 2004, Venezuela
- "RedCLARA La Red de Investigación, Desarrollo y Educación de América Latina", ESLARED, Florencio Utreras, Mérida, Venezuela, July 2005
- "RedCLARA Connections and Services", Advanced Routing Training, Eriko Porto (CLARA), Caracas, Venezuela, September 2005
- "CLARA-NOC", Advanced Routing Training, Hans-Ludwig Reyes (CLARA), Caracas, September 2005
- "REACCIUN and RedCLARA", LV Reunión de ASOVAC, Gilberto Landaeta (REACCIUN), Caracas, November 2005
- "GÉANT2, La Red Pan-Europea de Fibra Óptica y sus enlaces con Latino América", Lanzamiento de REACCIUN2, Marian Garcia Vidondo (DANTE), January 2006
- "ALICE/CLARA: Una oportunidad de desarrollo para America Latina", Lanzamiento REACCIUN, Guillermo Cicileo, Caracas, January 2006
- "CLARA en el Desarrollo y Gestión de Proyectos de Cooperación entre Latinoamérica y Europa", eHEALTH, Rocio Cos, Caracas, May 2006
- "REACCIUN and RedCLARA", Universidad Nacional Experimental Politécnica Antonio José de Sucre, Gilberto Landaeta (REACCIUN), Caracas, June 2006

Publications during the period (where / what / when)

Brazil:
- Rede Ipê, RNP Brochure, presenting backbone and international connections
- RNP Noticias, trimestrial newsletter distributed to subscribers free of charge. The RNP Noticias featured ALICE and RedCLARA
    - "Estabelecida conexão entre redes da América Latina e dos EUA"
    - "Brasil, Argentina e Chile estudam soluções para segurança em e-mail"

Both published in RNP Notícias number 23, September 2005

- Cronologia da Clara - RNP's webpage, presenting Clara history.

- Europa: Sobre as Redes Avançadas européias RNP's webpage, presenting the advanced european networks.

- A rede Ipê RNP leaflet, presenting backbone and international connections.

- "Clara muda sua topologia de rede visando à auto-sustentação", in RNP Notícias n. 30, June 2007 RNP's newsletter (printed)

- "Participação de técnicos do CEO em evento de redes da América Latina", in RNP's Engineering and Operation Center weblog, 31 July 2006.

Chile:
- REUNA enlazado a GÉANT: Conexión de Chile con Europa es la primera establecida en Latinoamérica mediante la RedCLARA (Video, REUNA)
- DeCLARA Bulletin No 1, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), April 2005
- DeCLARA Bulletin No 2, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), June 2005
- DeCLARA Bulletin No 3, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), August 2005
- DeCLARA Bulletin No 4, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), October 2005
- DeCLARA Bulletin No 5, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), December 2005
- DeCLARA Bulletin No 6, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), March 2006
- DeCLARA Bulletin No 7, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), May 2006
- DeCLARA Bulletin No 8, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), July 2006
- DeCLARA Bulletin No 9, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), September 2006
- DeCLARA Bulletin No 10, bi-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), November 2006
- DeCLARA Bulletin No 11, three-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), January 2007
- DeCLARA Bulletin No 12, three-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), April 2007
- DeCLARA Bulletin No 13, three-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), July 2007

- DeCLARA Bulletin No 14, three-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), October 2007
- DeCLARA Bulletin No 15, three-monthly news letter of CLARA, distributed via the Internet (in English, Spanish and Portuguese), January 2008
- DeCLARA Express Newsletter No 01, bi-weekly news flash of CLARA, distributed via email (only in Spanish), September 23, 2005
- DeCLARA Express Newsletter No 02, October 7, 2005
- DeCLARA Express Newsletter No 03, October 21, 2005
- DeCLARA Express Newsletter No 04, November 04, 2005
- DeCLARA Express Newsletter No 05, November 18, 2005
- DeCLARA Express Newsletter No 06, December 09, 2005
- DeCLARA Express Newsletter No 07, December 27, 2005
- DeCLARA Express Newsletter No 08, January 06, 2006
- DeCLARA Express Newsletter No 09, January 13, 2006
- DeCLARA Express Newsletter No 10, January 27, 2006
- DeCLARA Express Newsletter No 11, March 10, 2006
- DeCLARA Express Newsletter No 12, March 24, 2006
- DeCLARA Express Newsletter No 13, April 07, 2006
- DeCLARA Express Newsletter No 14, April 26, 2006
- DeCLARA Express Newsletter No 15, May 05, 2006
- DeCLARA Express Newsletter No 16, May 19, 2006
- DeCLARA Express Newsletter No 17, June 01, 2006
- DeCLARA Express Newsletter No 18, June 16, 2006
- DeCLARA Express Newsletter No 19, June 30, 2006
- DeCLARA Express Newsletter No 20, July 14, 2006
- DeCLARA Express Newsletter No 21, July 28, 2006
- DeCLARA Express Newsletter No 22, August 11, 2006
- DeCLARA Express Newsletter No 23, August 25, 2006
- DeCLARA Express Newsletter No 24, September 15, 2006
- DeCLARA Express Newsletter No 25, September 29, 2006
- DeCLARA Express Newsletter No 26, October 13, 2006
- DeCLARA Express Newsletter No 27, October 27, 2006
- DeCLARA Express Newsletter No 28, November 10, 2006
- DeCLARA Express Newsletter No 29, November 24, 2006
- DeCLARA Express Newsletter No 30, December 7, 2006
- DeCLARA Express Newsletter No 31, December 22, 2006
- DeCLARA Express Newsletter No 32, January 05, 2007
- DeCLARA Express Newsletter No 33, January 19, 2007
- DeCLARA Express Newsletter No 34, February 02, 2007
- DeCLARA Express Newsletter No 35, February 16, 2007
- DeCLARA Express Newsletter No 36, March 02, 2007
- DeCLARA Express Newsletter No 37, March 16, 2007
- DeCLARA Express Newsletter No 38, March 30, 2007
- DeCLARA Express Newsletter No 39, April 13, 2007
- DeCLARA Express Newsletter No 40, April 27, 2007
- DeCLARA Express Newsletter No 41, May 11, 2007
- DeCLARA Express Newsletter No 42, May 25, 2007
- DeCLARA Express Newsletter No 43, June 08, 2007
- DeCLARA Express Newsletter No 44, June 22, 2007
- DeCLARA Express Newsletter No 45, July 06, 2007
- DeCLARA Express Newsletter No 46, July 23, 2007
- DeCLARA Express Newsletter No 47, August 03, 2007
- DeCLARA Express Newsletter No 48, August 17, 2007
- DeCLARA Express Newsletter No 49, August 31, 2007
- DeCLARA Express Newsletter No 50, September 14, 2007
- DeCLARA Express Newsletter No 51, September 28, 2007
- DeCLARA Express Newsletter No 52, October 12, 2007

- DeCLARA Express Newsletter No 53, October 26, 2007
- DeCLARA Express Newsletter No 54, November 09, 2007
- DeCLARA Express Newsletter No 55, November 23, 2007
- DeCLARA Express Newsletter No 56, December 07, 2007
- DeCLARA Express Newsletter No 57, December 21, 2007
- DeCLARA Express Newsletter No 58, January 04, 2008
- DeCLARA Express Newsletter No 59, January 18, 2008
- DeCLARA Express Newsletter No 60, February 01, 2008
- DeCLARA Express Newsletter No 61, February 29, 2008
- DeCLARA Express Newsletter No 62, March 14, 2008
- DeCLARA Express Newsletter No 63, March 28, 2008

Colombia:
- RENATA network topology map, June 2006
- RENATA , afiche que presenta las redes regionales del país que conforman la red académica nacional.
- Plan nacional de TIC – desarrollo del documento para que RENATA sea incluida dentro del plan. Bogotá, Diciembre 2007.
- "Colombia lista para conectarse a la Red de Alta Velocidad", Revista de la Universidad de los Andes, Noviembre 2005
- "CINTEL y RENATA: Trabajando por el futuro de Colombia", Revista de Telecomunicaciones, CINTEL, Claudia Berbeo, Septiembre 2006.
- "RENATA, la mamá de las redes universitarias", periódico El Tiempo, Febrero 2006.

Ecuador:
- New brochure printed by CEDIA – May 2006
- Portal de CEDIA: http://www.cedia.org.ec/
- Promotional Brochure of CEDIA.

Nicaragua:
- Internet de segunda generación. RENIA brochure, Managua, February 2005
- Internet de segunda generación. RENIA brochure, Managua, December 2005
- Banner de proyecto TIC universidades públicas de Nicaragua. Asdi/SAREC. March, 2006

Spain:
- Boletín de RedIRIS #68-69, "ALICE y Eumedconnect" (p. 4-5), September 2004, by Esther Robles, Maribel Cosín, Miguel Ángel Sotos, Laura Serrano (all RedIRIS)
- Boletín RedIRIS nº 73 - septiembre de 2005, "Actualidad", Esther Robles, p. 5 y 6 de la revista, http://www.rediris.es/rediris/boletin/73/ACTUALIDAD.pdf
- Boletín RedIRIS nº 74-75 - diciembre 2005 - enero 2006 - "Informe anual de RedIRIS 2005", Alberto Pérez, Esther Robles y Diego López, p. 10, http://www.rediris.es/rediris/boletin/74-75/ponencia2.pdf
- Boletín RedIRIS nº 76 - abril 2006, p. 4, http://www.rediris.es/rediris/boletin/76/actualidad.pdf

UK:
- ALICE Project Brochure available in Spanish, Portuguese and English (3500 copies distributed)
- Cathrin Stöver, Michael Stanton: "Integrating Latin American and European Research Networks through the ALICE project", available from http://www.dante.net#
- ALICE Project Brochure available in Spanish, Portuguese and English
- ALICE/RedCLARA Video available in Spanish, Portuguese and English
- ALICE Case Study: the T@lemed Project
-                     DANTE   Newsletter,   No2,   December   2004, http://www.dante.net/server/show/conWebDoc.1147/viewPage/13 - RedCLARA launch report and http://www.dante.net/server/show/conWebDoc.1147/viewPage/14 - case study "ALICE and e-health" (Note: this Newsletter was distributed to 250 MEPs)

- DANTE Newsletter, No3, May 2005, http://www.dante.net/server/show/conWebDoc.1327/viewPage/14 - interview with Florencio Utreras, Executive Director of CLARA

The following news articles were published in The Works of DANTE newsletter

- September 2005   New Connections keep on coming!
- February 2006   Focus on: The ALICE Project. An interview with Cathrin Stöver.
- February 2006   Extension to ALICE project announced
- February 2006   Latin American launch events celebrate RedCLARA connections

A number of ALICE-related publications were produced by DANTE during the reporting period. All materials listed below can be found here

- Updated ALICE Brochure, with details of new connections and new users
- 2 new editions of the ALICE Topology Maps
- Updated ALICE case study –T@lemed project
- New ALICE case study - @lis Technet project

Uruguay:
- Publication of RAU2 and RedCLARA launch, November 2005, http://www.rau.edu.uy/redavanzad/inauguracion/
- RAU2 network topology map, November 2005
- "Red CLARA, Un sueño para la cooperación entre académicos y científicos, hecho realidad" : Capítulo de la publicación resumen del "Encuentro de científicas de América Latina realizado en mayo de 2006" . La publicación se realizó en Octubre/2006
- "Estudio diagnóstico sobre el proceso de conocimiento, adopción, difusión y desarrollo de aplicaciones sobre redes académicas avanzadas" (Estudio contratado para tener un panorama del conocimiento que hay sobre la Red y planificar futuras actuaciones)

Venezuela:
- REACCIUN2, 6 page folder, January 2006
- CD with various presentations related to REACCIUN2 and RedCLARA, January 2006

Project Partners' and Providers Press Releases

Brazil:
- [Ligação direta com a Europa](#)
Fundação de Amparo à Pesquisa do Estado de São Paulo announces Brazil's connection to Clara through ALICE - September 2004
Fundação de Amparo à Pesquisa do Estado de São Paulo, Brazil, 20 September 2004
- [Rede Clara conecta cientistas brasileiros à América Latina e Europa](#)
Ministério da Ciência e Tecnologia, Brazil, announces Brazil's connection to Clara through ALICE - September 2004
Ministry of Science and Technology, Brazil, 8 August 2004
- "Peruvian network gets connected to Clara", RNP, Brazil, 20 April 2005.
http://www.rnp.br/en/news/2005/not-050420a.html
- "The connection between CLARA & the United States has been settled", RNP, Brazil, 12 July 2005. http://www.rnp.br/en/news/2005/not-050712.html
- Title: RNP, Reuna e Retina estudam soluções para segurança em correio eletrônico, date: [RNP, 13.09.2005], URL: http://www.rnp.br/noticias/2005/not-050913.html
- Title: Segurança em correio eletrônico, date: [RNP, 16.09.2005], url: http://www.rnp.br/noticias/2005/not-050916.html
- Title: Nova rede óptica nacional é apresentada a parceiros internacionais, date: [RNP, 21.09.2005], URL: http://www.rnp.br/noticias/2005/not-050921.html
- Title: Colaborador da RNP é instrutor de treinamento em Caracas, date: [RNP, 23.09.2005], URL: http://www.rnp.br/noticias/2005/not-050923.html
- Title: CR2Net conecta-se à Clara, date: [RNP, 28.10.2005], URL http://www.rnp.br/noticias/2005/not-051028a.html
- Title: Uruguai lança oficialmente a rede avançada RAU2 e sua conexão à Clara, date: [RNP, 29.11.2005], URL: http://www.rnp.br/noticias/2005/not-051129a.html
- Title: Guatemala e El Salvador integram-se à Rede Clara, date: [RNP, 30.12.2005], URL: http://www.rnp.br/noticias/2005/not-051230.html
- Title:Conexão entre América Latina e Europa ganha novo fôlego, date: RNP, 17.01.2006], URL: http://www.rnp.br/noticias/2006/not-060117.html
- Title: Rede equatoriana foi conectada à Clara, Date: [RNP, 08.02.2006], URL: http://www.rnp.br/noticias/2006/not-060208.html
- Title: Renata interconecta a comunidade acadêmica colombiana, date: [RNP, 15.02.2006], URL http://www.rnp.br/noticias/2006/not-060215.html
- Title: Organismos de saúde do Mercosul fazem primeira reunião virtual, date: [RNP, 17.04.2006], URL http://www.rnp.br/noticias/2006/not-060417.html
- Title: Grades computacionais integram latino-americanos e europeus, date: [RNP, 24.04.2006], URL http://www.rnp.br/noticias/2006/not-060424.html
- [RNP-RELEASE] Brasil, Chile e Argentina estudam solucoes para seguranca em e-mail, 19.09.2005
- Rio de Janeiro, 08 December 2007 - "El Salvador sedia eventos de Clara e Alice" - released by RNP.
- Rio de Janeiro, 23 July 2007 "Clara muda sua topologia de rede visando à auto-sustentação" released by RNP
- Rio de Janeiro, 04 May 2007 "Acordo com a União Européia beneficia pesquisa latino-americana" Press release by Dante at RNP's Website (translated into Portuguese).
- Rio de Janeiro, 03 April 2007 "Workshop promove Eela na Argentina" released by RNP.
- Rio de Janeiro, 14 March 2007 "Universidade Virtual Ibero-Americana reúne sete universidades em cinco países" released by RNP.
- Rio de Janeiro, 22 February 2007 "Comissão Européia promove Dia Global de Informação" released by RNP
- Rio de Janeiro, 24 August 2006 "Projeto Eela quer encontrar usuários de grades computacionais na América Latina released by RNP.

- Rio de Janeiro, 23 August 2006 - "Músicos brasileiros, equatorianos e chilenos tocam juntos por meio de videoconferência"- released by RNP.

Chile:
- Encuentro de APAN reunió a los representantes de las redes avanzadas CLARA es miembro del Consorcio Asia-Pacífico de redes, APAN, REUNA, 23 July 2004
- Italo Foppiano, de la U. de Concepción, será Formador de Formadores en la Red CLARA. REUNA, 3 August 2004
- Cooperación LatinoAmericana de Redes Avanzadas CLARA llama a presentar candidaturas para el cargo de Director Ejecutivo, REUNA, 1 September 2004
- REUNA enlazado a GÉANT: Conexión de Chile con Europa es la primera establecida en Latinoamérica mediante la RedCLARA. REUNA, 3 September 2004

- 22 de noviembre: RedCLARA, Primera Red de Educación e Investigación Latinoamericana, fue presentada en III Foro Ministerial EU-LAC, REUNA, 23 November 2004

- RedCLARA una realidad, el espacio pan-latinoamericano para la investigación, la educación y el desarrollo, REUNA, 6 December 2004

- Para hacerse cargo de la Dirección Ejecutiva de CLARA, Florencio Utreras dejó la Dirección de REUNA. REUNA, 3 January 2005

Colombia:
- Bogota, 24 January 2006 – "Creada la Red Nacional Académica de Tecnología Avanzada", released by RENATA
- Bogota, Enero 24 2006 – "Lanzamiento de la Red Nacional Académica de Tecnología Avanzada", Instituciones de gobierno y redes regionales.
- Bogotá, Mayo 2 , 2007 – "Firmada el acta de constitución de la Corporación RENATA", Instituciones Académicas y entidades de Gobierno.
- Bogotá, Junio 2007, "Convocatoria para el apoyo a proyectos de investigación desarrollo tecnológico e innovación que hagan uso de la infraestructura y servicios de la Red Nacional Académica de Tecnología Avanzada RENATA", elegidos 13 proyectos para su co-financiación por parte de Colciencias y el Ministerio de Educación.
- Promoción para el desarrollo de nuevas redes regionales, presentaciones "RENATA" y reuniones en las ciudades de Cartagena, Pasto, Pereira, Popayán, Quibdó y Tunja.
- Noviembre 2007, Participación en la cena ofrecida por la firma "Thompson", luego del acuerdo relaizado con Colciencias para la vinculación y desarrollo de consorcios de las Universidades del país para tener acceso a estas bases de datos.
- Participación en el programa de televisión TV – Teleamiga , tema educación virtual y RENATA. Martha Giraldo,RENATA, Octubre 2007
- Grabación de programa de una hora a ser emitido por la Radio Nacional. Martha Giraldo,RENATA, Noviembre 2007.

El Salvador:
- "Red avanzada latinoamericana crece", RAICES, Abril de 2005.

Nicaragua:
- "Nicaragua conectada a Internet de segunda generación", Comunicado de CNU, Mayo 2005.
- "Internet2. Universidad y Sociedad Journal" Consejo Nacional de Universidades, Mayo 2005.

UK:
- [Cisco Systems Technology Enables Latin American Research & Education Network](#) Cisco Systems, 24 November 2004
- [Latin America's first research and education network causes a stir enabling advanced applications!](#)

RedCLARA delivers immediate benefits: Increased collaboration between researchers and delivery of basic health and education services.
DANTE, 17 November 2004
- Primera Red de Educación e Investigación Latinoamericana fomenta el desarollo de Aplicaiones Avanzadas
RedCLARA Entrega Beneficios Immediatos. Incrementa la colaboración entre investigadores y entrega servicios para la medicina y la educación
DANTE, 17 November 2004
- A primeira rede de pesquisa e educação da América Latina causa reboliço com suas aplicações avançadas!
RedCLARA entrega beneficios imediatos. Maior colaboração entre os pesuisadores e prestação de serviços básicos de saúde e ensino
DANTE, 17 November 2004
- Global Crossing Press Release: Global Crossing Connects Latin American and European Research Communities
ALICE project will create RedCLARA network in Latin America
Global Crossing, 5 August 2004
- ALICE Project Develops First Latin American Research & Education Network
EU-funded ALICE initiative to launch Latin America's first regional research network, including direct connection to pan-European GÉANT network
DANTE, 26 May 2004
- El proyecto ALICE crea la primera red latinoamericana de investigación y educación
Press release in Spanish: EU-funded ALICE initiative to launch Latin America's first regional research network...
DANTE, 26 May 2004
- Projecto ALICE Desenvolve a Primeira Rede de Educação e Investigação da América Latina
Press release in Portuguese: EU-funded ALICE initiative to launch Latin America's first regional research network...
DANTE, 26 May 2004
- "Cisco Systems Technology Enables Latin American Research & Education Network", Cisco Systems - Press Release, January 2005
- "Logicalis Group provides high speed Latin American Research & Education network and Transatlantic Link", Logicalis Press Release, June 2005, http://alice.dante.net/server/show/conWebDoc.1353

Released by DANTE:
- Cambriidge, 28 April 2006   Latin American Research Goes Global With RedCLARA Network
- Cambridge, 28 April 2006   Commissioner Reding calls for extension to RedCLARA-GÉANT2 partnership
- Cambridge, 9 January 2006 Research and Education in Emerging Nations Boosted by Network Extensions
- Cambridge, 22 December 2005   Three new countries join the RedCLARA Network

Coverage was tracked in publications throughout Latin America, Europe and Asia Pacific, including: El Dia, El Pais, El Progreso, and International Herald Tribune.

Uruguay:
- "Uruguay se incorpora a la red avanzada latinoamericana RedCLARA con la cooperación del proyecto ALICE", RAU, Junio 2005
- Montevideo, 25 November 2005: "Los academicos uruguayos estaran mejor comunicados con sus pares! Uruguay inaugura nueva red de transmision de datos y conexión con Latinoamerica y Europa", published in various newspapers: (El Observador, El País) and to be read in TV channels in Uruguay (Canal 10 y canal 12)

Publications in the International Press (where / what / when)

Country: Nicaragua
Publication: La Prensa
Title: Universidades con Internet2
Page: http://www.laprensa.com.ni/archivo/2004/febrero/24/informatica/informatica- 20040224-01.html
Date: February 24, 2004

Country: El Salvdor
Publication: El Mundo
Title: LACTLD, CLARA & ALICE
Author: Rafael Ibarra
Page: 21
Date: 16 April 2004

Country: Chile
Publication: El Mercurio
Title: Nuevas redes de alta velocidad: La Autopista que Estrellará Europa
Author: Richard García
Page: 16
Date: July 13, 2004

Country: Ecuador
Publication: Tecnociencia
Title: Equipos de comunicacion para fortalecer las comunicaciones
Page: No. 14
Date: 14 September 2004

Country: Ecuador
Publication: Tecnociencia
Title: Aplicaciones Informaticas Avanzadas
Page: No. 14
Date: 15 October 2004

Country: Brazil
Publication: FAPESP - Fundação de Amparo à Pesquisa do Estado de São Paulo, Brasil
Title: Rede Clara é inaugurada
Author:
Page: http://www.agencia.fapesp.br/boletim_dentro.php?id=2886
Date: November 22, 2004

Country: Brazil
Publication: Agenci@ CT - Ministerio de Ciencia y Tecnología, Brasil
Title: Rede Clara é lançada com recursos de 12,5 milhões de euros
Author: Helena Beltrão - Assessoria de Imprensa do MCT
Page: http://agenciact.mct.gov.br/index.php?action=/content/view&cod_objeto=21952
Date: November 22, 2004

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Title: Hacia otra Red
Author: Marta Molina
Page: 7
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Title: La brecha tecnoligia se ahonda en Ecuador
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Author: Ivannia Meza, MICIT
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Author: Pamela Carrasco
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Title: Nicaragua entra a Internet2
Author: Victor García de ENITEL
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Date of Publication: November 7, 2005
Author: Enrique Peláez
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Title: "Ecuador se une a redes avanzadas, la autopista Científica"
Date of Publication: April 3, 2006
Author: Enrique Peláez
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Date of Publication: May 10, 2006
Author: Enrique Peláez
Media: Radio Tropicana

Country: Ecuador
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Date of Publication: May 19, 2006
Author: Enrique Peláez
Media: News cable, Channel 3

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Author: Rocio del Valle
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Date of publication: June 14, 2006
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Country: México
Author: Gregorio Martínez Moctezuma
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Date of publication: April 27, 2006
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Country: Bolivia
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Date of publication: April 27, 2006
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Country: Brazil
Autor:
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Date of publication: April, 22, 2006
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Country: Brazil
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Country:
Author: Douglas Quintero Vinces
URL: http://www.mygnet.com/noticias/346/

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Date of publication: February 13, 2006
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Country: Brazil
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Date of publication: January 20, 2006
Media: Ministerio de Educación Nacional, Colombia
Country: Colombia
Author
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Date of publication: January 19, 2006
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Country: Brazil
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Media: Laboratorio Tecnológico del Uruguay – LATU
Country: Uruguay
Author:
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Date of publication: November 29, 2005
Media: Presidencia de la República Oriental del Uruguay
Country: Uruguay
Author:http://www.presidencia.gub.uy/_web/noticias/2005/11/2005112901.htm

Title: Inauguración de la Red Académica Avanzada de transmisión de datos RAU2 y su conexión a la Red Latinoamericana (RedCLARA)
Date of publication: November 29, 2005
Media: Instituto Nacional de Investigación Agropecuaria (INIA) del Uruguay
Country: Uruguay
Author:
URL:http://www.inia.org.uy/online/site/181034I1.php

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Date of publication: November 29, 2005
Media: Espectador.com
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Country: Uruguay
Author
URL:http://www.universia.edu.uy/index.php?option=com_content&task=view&id=425&Itemid=45

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Date of publication: November 27, 2005
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Country: Urugay
Author
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Author
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Country: Perú, Lima

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Date of publication: October, 30, 2006
Media: Ahciet
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Author
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Country: Perú, Lima
Author
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Author: Prof. Jaim Royero
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Date of publication: January 24, 2006
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Country: Colombia
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Date of publication: November 25, 2005
Media: Profes.net
Country: España
Author:
URL:http://www.profes.net/noticias_red2.asp?id_contenido=25660

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Date of publication: October 13, 2005
Media: La Red, el periódico de Internet
Country: Venezuela
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Date of publication:
Media: DINERO, Negocios en la World Wide Web
Country: Venezuela
Author:
URL:http://www.dinero.com.ve/194/portada/competenciae.html

Title: Universidades colombianas ingresan a Red mundial de Alta Velocidad
Date of publication:
Media: El Centro de Investigación de las Telecomunicaciones CINTEL
Country: Colombia
Author:
URL: http://www.cintel.org.co/rctonline/noticia.php3?nt=3229

Title: Cooperación Chile-UE: De igual a igual con el viejo continente
Date of publication:
Media: El Mercurio, ediciones especiales
Country: Chile
Author:
URL:http://www.edicionesespeciales.elmercurio.com/destacadas/detalle/index.asp?idnoticia=0108072005021X0110140&idcuerpo=153

Title: Universidades colombianas ingresan a Red mundial de Alta Velocidad
Date of publication:
Media: El Centro de Investigación de las Telecomunicaciones CINTEL
Country: Colombia
Author:
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Date of publication: 18 January 2006
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Country: Venezuela

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Date of publication: 18 January 2006
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Country: Venezuela

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Date of publication: 18 January 2006
Media:
Country: Venezuela

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Media: La Flecha
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Country: Venezuela

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Date of publication: 31 January 2006
Media: Entre Bits y Bytes
Country: Venezuela

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Date of publication: June 2006
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Country: Venezuela

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Date of publication: 2 February, 2006
Media: eGov monitor
Country: UK
Author
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Date of Publication: 18 January 2006
Media: IT Observer
Country: Pan-European
Author: http://www.ebcvg.com/press.php?id=1951

Title: Latin America Research goes global with RedCLARA connections
Date of Publication: 28 April 2006
Media: Grid Today
Country: US
Author: http://news.taborcommunications.com/msgget.jsp?mid=641310

Title: Montilla destaca el Plan Avanza como una apuesta contra la brecha digital
Date of Publication: 1 May 2006
Media: El Dia
Country: Spain
Author: (Print publication only)

Title: Montilla destaca el Plan Avanza como una apuesta contra la brecha digital
Date of Publication: 1 May 2006
Media: El Progresso
Country: Spain
Author: (Print publication only)

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Date of Publication: 1 May 2006
Media: Grid Today
Country: US
Author: http://www.gridtoday.com/grid/642358.html

Title: Culture Counts: Regions create links for education and research
Date of Publication: May 12 2006

Media: International Herald Tribune
Country: Pan-European
Author: (Print version only)

Country: Ecuador
Title: ""Ecuador se une a Internet 2, la autopista científica; Clara es la nueva conexión latinoamericana"
Date of Publication: 3 de abril del 2006
Author: Enrique Peláez
Media: Revista Líderes del Comercio.
URL:

Country: Ecuador
Title: "Entrevista programa educación",
Date of Publication: 14 de abril y 19 de Mayo del 2006.
Author: Enrique Peláez
Media: Cablenoticias
URL:

Country: Ecuador
Title: "Ecuador, más conectado con la ciencia".
Date of Publication: 25 de Julio del 2006.
Author: Enrique Peláez
Media: Cablenoticias
URL:

Country: Ecuador
Title: "El cambio de la Internet hacia redes avanzadas"
Date of Publication: July 29, 2006
Author: Enrique Peláez
Media: El Universo
URL:

Country: Brazil
Title: "Rede Clara anuncia expansão"
Date of Publication: 11 May, 2007
Author: Unknown
Media: Agência Fapesp
URL: http://www.agencia.fapesp.br/boletim_dentro.php?id=7125

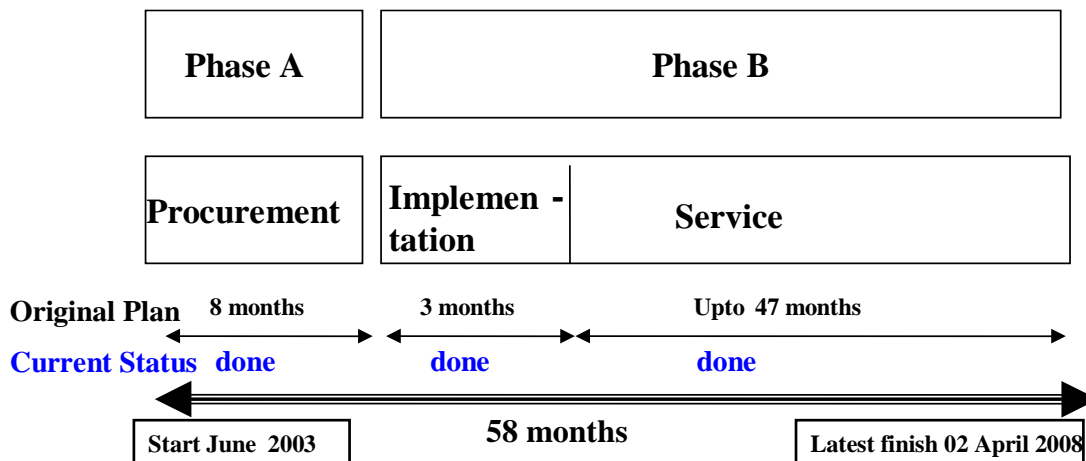## 4.4 Management administration and resources employed

Table 6 below gives an overview of the manhours spent in each of the workpackages by CLARA, DANTE, REUNA, RNP and CUDI. It has to be stated that none of the other NREN partners charged the manhours spent to the project. This means that a significant number of volunteer work – specifically in the engineering area has been carried out. In addition, the project required the NREN partners to work on certain issues within the national organisations and structure. Also this manpower is not reflected in the table below.

	WP0	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	WP9	Total
CLARA	7034.5	336.3	1008	267.2	434.05	85.75	272.70	48	2743.65	6222.3	**18452.45**
DANTE	3411.03	556.39	0	24.98	485.63	248.36	72.15	198.41	453.71	1696.91	**7146.18**
REUNA	55.5	623	0	50	2026.5	0	0	0	0	3766.2	**6521.20**
RNP	1284	179	938.5	26	1369.5	2405	57	228.5	165	4	**6656.50**
CUDI	2	1075	0	1419	3187	6460	245	4	112	80	**12584**
Total	**11787.03**	**2769.69**	**1946.5**	**1787.18**	**7502.68**	**9199.11**	**646.85**	**478.91**	**3474.36**	**11769.41**	**51360.33**

Table 6: Manhours spent during the lifetime of ALICE

4.5 Project timescale

The following figure shows the originally anticipated and the current status of the ALICE timescale.

4.6 Additional observations

Additional work carried out

Report on how RedCLARA supports the Millennium Developments Goals
During November 2007, the question was raised in how far an infrastructure project such as RedCLARA supports the Millennium Development Goals (MDGs). The ALICE project partners responded to this question by providing practical examples of applications running over RedCLARA within Latin America and between Latin America and Europe that support the MDGs.

The role of ICTs for development poverty reduction has been widely demonstrated in several strategic papers and communications. For instance, the World Bank report on "the Network revolution and the Developing World" (2000) demonstrated the macro-level correlation of development progress and telecommunications progress and showed the importance of communication and information for development, both in the commercial and the public sector. Many publications today point out the need for ICT supported applications in education and health, in the reduction of the impact of environmental and climate changes and the research carried out on agricultural products. In all these areas a research and education infrastructure such as RedCLARA in Latin America plays an integral part. RedCLARA's link to the European GEANT2 network ensures connectivity on a global scale, thus enabling research collaboration and networking across the world.

Concrete examples from across Latin American institutions connected to RedCLARA have been collected and show in how far RedCLARA and its interconnection to GEANT2 support the Millennium Development Goals related to the Reduction of Extreme Poverty and Hunger, Health Improvement and Disease Control, Education, Environmental Sustainability and Global Partnership for Development.

Study of synergies between ALFA programme and ALICE
Between March and May 2006 DANTE carried out an analysis of the overlap and potential synergies between the ALFA programme and the ALICE project.

ALFA is a cooperation programme between the European Union and Latin America in the field of Higher Education. The ALFA programme supports Latin American Academic Training via projects with partners in European and Latin American universitities. Both ALFA and RedCLARA have partners in the 18 Latin American beneficiary countries of Argentina, Brazil, Bolivia, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. RedCLARA today interconnects the national research and education networks (NRENs) in 14 of the 18 named countries above. The NRENs in these 14 countries connect today more than 730 universities.

12 of the 14 NRENs already connected to RedCLARA partners compared the 2005 Compendium of the ALFA programme with the universities and institutions connected to their respective National Research and Education Network. In total 62% of the universities participating in ALFA also have access to RedCLARA via the National Research and Education Network and these 12 countries. It has to be noted that in some countries this percentage is significantly higher such as in Guatemala and Nicaragua (both 100%), or Mexico (82%) and Brazil (74%). The following table shows the complete overview.

Country	Number of Institutions participating in ALFA	Number of Institutions participating in RedCLARA and ALFA	%
Argentina	58	33	**57**
Brazil	61	45	**74**
Chile	27	8	**30**
Colombia	33	22	**67**

Ecuador	9	6	**67**
El Salvador	4	1	**25**
Guatemala	3	3	**100**
Mexico	51	42	**82**
Nicaragua	3	3	**100**
Peru	18	5	**28**
Uruguay	7	4	**57**
Venezuela	8	4	**50**
Total	**282**	**176**	**62**

Table 7: Number of Institutions participating in RedCLARA and ALFA by Country

The complete findings of the study have been made available to the EC (document ALI-06-052). A summary has been published in the ALFA Flash No.21 and also in the 7th Edition of the @LIS programme publication.

Cooperation with @LIS demonstration projects
The ALICE project met the @LIS demonstration projects for the first time in the @LIS Programme Meeting held in Quito, Ecuador in March 2004. Following from that meeting, ALICE established close ties to the demonstration projects T@lemed and @LIS-Technet. Both projects have been using RedCLARA ever since its existence.

T@lemed supported the ALICE and RedCLARA launch event in November 2004 when ALICE, CLARA and T@lemed jointly produced a video showing the RedCLARA network in action while supporting one of the T@lelmed health applications.

@LIS-Technet has cooperated with ALICE during the implementation phase of RedCLARA and has carried out measurements showing the improvement that RedCLARA brings to the @LIS-Technet applications.

RedCLARA has furthermore supported the JIQ project which has been running video-conferences over RedCLARA and the @LIS Health Network and ELAC have been using the RedCLARA network for their data communications and video conferencing. CLARA has established contact with the @LIS project Atlas de la Diversidad and is planning participation in this project.

CLARA and DANTE participated in the @LIS-ISN organised @LIS day which used RedCLARA connectivity for the online day held between European and Latin American sites.

Consolidation of New Latin American NRENs
Starting from the momentum created by the CEASAR (Connecting all European and South American Researchers, an IST project that laid the foundation for ALICE in 2002) project, new NRENs were founded in Colombia, Ecuador, El Salvador, Guatemala, Nicaragua and Paraguay. During 2004, important efforts were made by these newly created organisations to consolidate their role and their funding within the respective country.

Consolidation of CLARA
The statutes of CLARA were signed by 15 Latin American NRENs in June 2003. In December 2003, CLARA was registered as an international not-for-profit association in Uruguay. During 2004, the technical side of the CLARA organisation started operating through the creation of the CLARA Network Engineering Group (NEG, task carried out by RNP, Brazil) and the CLARA Network Operations Centre (NOC, task carried out by CUDI, Mexico).

Starting in summer 2004, the CLARA Board of Directors commenced the search for an Executive Director for CLARA. In November 2004, the CLARA Board of Directors selected Florencio Utreras

as the CLARA Executive Director. Florencio Utreras used to be the Executive Director of the Chilean NREN, REUNA. He began his work for CLARA on 1 January 2005. CLARA consolidated further during 2005 and 2006 through the employment of a Project Manager, a PR Manager and a Training Officer and a Chief Financial Officer.

CLARA's main objective in 2005 was the creation of a strategic plan for the CLARA organisation and the RedCLARA network. Work on this plan started in a meeting in Buenos Aires in April 2005, when the CLARA Members and DANTE came together in a meeting organised by the Instituto Desarrollo Innovativo (IDI). Following the method of participative innovation the CLARA Members started the definition of projects for CLARA to carry out. This work was finalised during the ALICE meeting in Guatemala in July 2005 and in September 2005 the IDI presented the Strategic Plan for CLARA. The document has been made available to the EuropeAid Cooperation Office alongside this Technical Report. The strategic planning for CLARA was revisisted during the ALICE2 preparation meeting which was held in Buenos Aires in March 2008.

Database of Latin American cooperative research projects
This activity was driven by the Chilean NREN, REUNA, working on behalf of CLARA. REUNA started the development work on 1 November 2004. The functionality of the database was tested by the ALICE partners in May 2005 and refinement continued during 2005. Development work was subsequently carried out to adopt the database to local existing databases. The manpower used for the creation of the database was being paid for by the ALICE project. To that end, DANTE has signed a bilateral contract with CLARA, who in their turn were outsourcing the work to the Chilean NREN, REUNA.

Participation in EC IST projects
CLARA and several of the Latin American NRENs have cooperated with European partners in the drafting of EC IST project proposals. The following table gives an overview of the successful applications:

Project Name	Project No.	Coordinator	LA-Partners
EELA-E-Infrastructure shared between Europe and Latin America	026409	CIEMAT, Spain	Universidade Federal do Rio de Janeiro (BR) Universidad de Los Andes (VZ) Comissão Nacional de Energia Nuclear (BR) Centro de Gestión de la Información y Desarrollo de la Energía (CU) Universidad Técnica Federico Santa María (CL) Cooperación Latinoamericana de Redes Avanzadas (Latin America) Universidade Federal Fluminense (BR) Universidad Nacional Autónoma de México (MX) Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro (BR) Rede Nacional de Ensino e Pesquisa (Brazil) Servicio Nacional de Meteorología e Hidrología (Peru) Red Universitaria Nacional (Chile) Universidad de Concepción (Chile) Universidad Nacional de La Plata (Argentina)

AUGERACCESS Integrating Auger Observatory and European Research Institutions into a worldwide Grid	023457	INFN, Italy	RETINA (AR)
EXPRESS Express e-VLBI Service		Joint Institute for VLBI in Europe, Dwingeloo, The Netherlands	Observatorio Geodesico TIGO, Universidad de Concepcion, Concepcion, (CL)
RINGrid, Remote Instrumentation in Next Generation Grids		PSNC, Poznan, Super Computing Centre (Poland)	UNAM (MX) CLARA (UY) RNP (BR) REUNA (CL)

Table 8: Overview of successful IST project applications

Volcano sonification

Under the umbrella of the European EGEE project, INFN (IT) carried out work in the area of data sonification of the seismograms of Mount Etna in Catania. Data sonification is the representation of data by sound signals. It can be considered as the acoustic counterpart of data graphic visualisation, a mathematical mapping of information from data sets to sounds. Data sonification is currently used in several fields, for different purposes: science and engineering, education and training, mainly as data analysis and interpretation tool. Data sonification has been applied to geophysical data collected by a digital seismograph placed on the Etna volcano in Italy. The hope is to learn more about eruption dynamics from patterns in sonograms.

The Italian scientists are very interested to collaborate in the area of data sonification with researchers from countries with volvanic activities. Following a chance meeting in the EU-LAC summit in Lisbon, such collaboration was established between Italy and Ecuador, El Salvador as well as Guatemala. By the time of writing the report, the seismogram of the very active Ecuadorian volcano Tungurahua had been transferred into a sonogram.

El Salvador, ELAC:

Political lobby work was carried out to achieve the inclusion of RedCLARA, specifically, as one of the goals of the political declaration known as "Compromiso de San Salvador" (see www.elac2007.org.sv), signed by all of the Latin American and Caribbean countries, in the II Ministerial Summit for the Information Society, held in San Salvador, from February 6 to 8, 2008. Specifically, it is included in Goal 19, where Elac2010 aims at "Connect **80%** of research and educational centres, particularly centres of higher education, to advanced data communications networks for research and education, such as RedCLARA and C@ribNET, or **triple** the current number.", thus recognizing the tremendous visibility reached by RedCLARA and also, as stated in Goal 13, it is seen as key to expand its reach and connect "Support the implementation of regional and subregional initiatives which take advantage of the economies of scale and scope of the relevant countries, particularly in order to serve those sectors that have been marginalized from technological progress, such as @LIS, RedCLARA, C@ribNET, Puebla-Panama Plan Meso-American Information Highway.". It is clear that RedCLARA is now well established as a leading Project to link researchers and educators and achieve the goal of creating better and more egalitarian societies.

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Problems arising and Corrective Actions

A major problem arose during 2005 and impacted on the stability of the project has been that the connected Latin American NRENs proved to be very slow payers of their 20% contribution to the ALICE project. By April 2005, the outstanding NREN payments into the 20% account constituted a serious problem for the project with DANTE having to make a loan to the project to be able to pay the connectivity invoices for RedCLARA connections.

In November 2004, DANTE had posted the first invoices for the Membership in the ALICE project to those Latin American NRENs that were connected to RedCLARA in autumn 2004. By the beginning of 2005, it became obvious that payment of the invoices started rather slowly and DANTE began contacting the Latin American NRENs concerning their payments. The issue became more urgent when payment was still very slow in April 2005 and pressure on the Latin American NRENs to pay their contribution became stronger. In June 2005, DANTE organised a meeting with the Executive Director of CLARA to discuss the seriousness of the issue which was followed by a meeting between DANTE and the CLARA Board of Directors in mid-June. Subsequently CLARA and the Latin American NRENs committed to the following set of payment rules:

1. All currently connected NRENs are in the progress to oblige with the six months in advance payment to which CLARA committed in June 2005 in Luxemburg.

2. It is recognised that the already connected NRENs have contributed to the visible cash flow improvement since May 2005. All the connected NRENs are committed to further stabilise the cash flow in order to reach the break even of the cash flow by the end of October 2005 and to maintain a positive cash flow throughout the remaining project lifetime.

3. The NRENs of Costa Rica, El Salvador Guatemala and Nicaragua are in the process of making six months in advance payments to DANTE for the connectivity under the Telmex contract.

In order to establish a firm payment discipline the CLARA Board of Directors in addition decided that it would have the possibility to disconnect NRENs from the RedCLARA network, should payment be more than six months outstanding.

The payment situation was discussed with the EuropeAid Cooperation Office in July 2005 and in the case of Argentina and Chile where payment could not be made due to complex circumstances in the NREN organisation and relation with the respective national government, the European Delegations have become involved.

In the case of Panama, progress was very slow but RedCyT reported to DANTE and CLARA that full payment was advised during June 2006. This payment was finally received at the end of 2006.

The case in Argentina was very complex. The Argentine NREN, RETINA, was partner in the ALICE project. RETINA itself was a project under the umbrella of Ciencia Hoy.Funding and payment of the connectivity to RedCLARA was to be received from the Minstry of Science and Technology. When the payment was not made and DANTE and CLARA started pressuring, the Argentine Ministry for Science and Technology investigated closely into the role of RETINA and the importance of research networking in Argentina. The Ministry came to the conclusion that an independent organisation such as RETINA via Ciencia Hoy was not the right partner for the Ministry in the important task of research networking. Therefore it was decided to move the responsibility for Argentine research networking and its interconnection to RedCLARA to a different governmental agency, called Innova-T. This led to various organisational changes and obviously to delays. It was made clear by the Ministry that Argentina first wanted to handle the internal changes before payment to ALICE project could be made. During 2006 DANTE and CLARA received a letter from the Ministry for Science and

Technology with a clear commitment to the payment of the oustanding invoices. All payments from Argentina to the ALICE project were settled by February 2007.

In addition, the project suffered from non-payment from Costa Rica. Costa Rica connected to the RedCLARA network in September 2005 following immense pressure from the Costa Rica Ministry for Science and Technology. Payment for the first 6 months of connectivity was received partially from the Costa Rican authorities and partially from CLARA. Since this initial payment, Costa Rica, although pressuring immensely for being connected, was not able to make payment, mainly for internal bureaucratic hurdles and also for some hesitance from the main university in the country to join the national CR2Net network.

DANTE and CLARA were in regular contact with the Costa Rican Ministry of Science and Technology and wrote to the Minister urging immediate payment. Costa Rica was on a spur link to the RedCLARA PoP in Tijuana. Connectivity was provided via Telmex and the link was the most expensive link within the entire RedCLARA network. DANTE and CLARA therefore took the decision to limit the ALICE project's financial exposure as much as possible and it was communicated to Costa Rica that unless full payment was received by 31 July 2006, the NREN would be disconnected from RedCLARA during September 2006. The outstanding payment from Costa Rica was never received and connectivity to Costa Rica was suspended in September 2006.

5. Conclusion

At the end of ALICE the following conclusions can be drawn:

- During the lifetime of ALICE, 14 Latin American NRENs were able to connect to the Latin American RedCLARA network. The RedCLARA network and its interconnection to the European GÉANT network became operational in September 2004. This means that the main objective of the ALICE project was achieved.
- The relationship between the European and Latin American NRENs and DANTE deepened thanks to ALICE. For the European GEANT2 community, CLARA constitutes a reliable partner for regional research networking between Europe and Latin America.
- The connectivity procurement process showed that connectivity was available and affordable in a number of Latin American countries. However, the first connectivity tender failed to bring results for the connection of Bolivia, Colombia, Cuba, Ecuador, Honduras and Nicaragua. A new tender requesting offers for connectivity to these six countries was launched in November 2004 with successful results.
- The NRENs of Argentina, Brazil, Chile, Mexico, Panama and Venezuela committed to ALICE funded connectivity during 2004. These six networks constituted a critical mass of Latin American NREN participation in Phase B of ALICE as they could be connected into the Latin American research network ring.
- During Phase A of ALICE the basis was laid for a technical training and support plan to be carried out during Phase B of ALICE. A questionnaire which was distributed to all LA partners showed great interest in training and technical support. Subsequently bi-annual technical meetings were held that provided technical support and training to engineers at connected Latin American NRENs.
- RedCLARA was launched officially at the EU-LAC Summit of the Information Society in Rio de Janeiro in November 2004. The launch event was rated a great success by the ALICE partners and the participants of the summit.
- The CLARA Network Engineering Group and the CLARA Network Operations Centre were created during 2004. Under the umbrella of CLARA-Tec these two groups share the responsibility for the implementation and operations of the RedCLARA network.
- CLARA appointed an Executive Director for the organisation and subsequently increased its members of staff and grew into a stable organisation.
- The ALICE partners have done a great effort to promote the project across Latin America, Europe, the USA, Africa and the Asia Pacific region. The global research networking community has been made aware of RedCLARA. The launch of RedCLARA in Rio de Janeiro in November 2004 has given visibility to the project to the key players, organisation and institutions of the Latin American and European Information Society. ALICE, CLARA and RedCLARA successfully lobbied the participants of the EU-LAC summit of the Information Society which was celebrated in Lisbon in April 2006. The project, the network and its future feature in the Lisbon Declaration.
- The slow payment of the 20% NREN contribution to the ALICE project by some of the RedCLARA connected NRENs led to a financial instability of the project. DANTE, CLARA and the EuropeAid Cooperation Office discussed the situation and worked together. Thanks to this collaboration, the project partners were able to overcome the financial difficulties in the beginning of 2007.
- The results of the second connectivity tender gave DANTE and CLARA a complete overview of the costs of running RedCLARA and the ALICE project. The project partners agreed to request an extension of the EC contract between DANTE and the EuropeAid Cooperation Office to be able to make use of all available funds.
- CLARA and several Latin American NRENs successfully applied as partners in EC co-financed IST projects. These projects need the RedCLARA infrastructure to fulfill their data communication needs. The participation in IST projects was possible thanks to the RedCLARA infrastructure and exemplifies that a latent need existed for a research network in Latin America.
- The partners in Bolivia, Cuba, Honduras and Paraguay were not able to accept the connectivity offer as made by DANTE and CLARA. These countries were not able to connect to RedCLARA during the lifetime of the ALICE project

Annex 1 ALICE Partner Overview

The following organisations were partners in the ALICE project

Organisation	Country
DANTE	Co-ordinating Partner, UK
InnovaRed	Argentina
ADSIB	Bolivia
RNP	Brazil
REUNA	Chile
RENATA	Colombia
CRNET	Costa Rica
RedUNIV	Cuba
CEDIA	Ecuador
RAICES	El Salvador
RENATER	France
RAGIE	Guatemala
UNITEC	Honduras
GARR	Italy
CUDI	Mexico
CNU on behalf of RENIA	Nicaragua
RedCyT	Panama
Centro Nacional de Computacion – UNA on behalf of ARANDU	Paraguay
RAAP	Peru
FCCN	Portugal
RedIRIS	Spain
RAU	Uruguay
REACCIUN	Venezuela

Annex 2: Abbreviations

ADSIB	Agencia de Desarrollo de la Sociedad de Informacion Bolivia
ALICE	America Latina Interconectada Con Europa
ARANDU	Paraguayan National Research and Education Network
CA	Central America
CAESAR	Connecting all European and South American Researchers
CalREN	Californian Research and Education Network
CEDIA	Consorcio Ecuatoriano para el Desarrollo de Internet Avanzado
CLARA	Cooperacion Latino Americana de Redes Avanzadas
CNTI/REACCIUN	Centro Nacional de Tecnologia de Informacion, Venezuela
CRNET	Costa Rican Research Network
CUDI	Cooperacion Universitaria para el Desarrollo de Internet
D.	Deliverable
DANTE	Delivery of Advanced network Technology to Europe
EU-NREN	European National Research and Education Network
EUMEDCONNECT	Project for the interconnection of Mediterranean and European research networks, managed by DANTE
FCCN	Fundacao para a Computacao Cientifica Nacional, Portugal
GARR	Italian National Research Network
GÉANT2	Pan-European research network
IP	Internet Protocol
IPv6	Internet Protocol version 6
LA-NREN	Latin American National Research and Education Network
LA-Partner	Latin America Partner
Mbps	Megabit per second
RAC	Red Academica Colombiana
RAICES	Red Avanzada de Investigacion, Ciencia y Educacion Salvadorena
RAGIE	Red Avanzada Guatemalteca de Invesitigacion y Educacion
RAAP	Red Avanzada Academica Peruana
RAU	Red Academica Uruguaya
RedCyT	Red de Ciencia y Tecnolgia, Panama
RedIRIS	Spanish National Research Network
RedUniv	Red Universitaria Cubana
RENATER	Reseau National de Telecommunications pour la Technolgie, l'Enseignement et la Recherche, France
RENIA	Red Nicarguense de Investigacion y Academia
RETINA	Red Teleinformatica Academica, Argentina
REUNA	Red Universitaria Nacional, Chile
RNP	Rede Nacional de Ensino e Pesquisa, Brazil
TEIN2	Project for the interconnection of South East Asian and European research networks, managed by DANTE
TERENA	Trans-European Research and Education Networking Assocoation
STM-1	Synchronous Transport Modules – 1 (155 Mbps)
STM-4	Synchronous Transport Modules – 4 (622 Mbps)
UNA	Universidad Nacional de Asuncion, Paraguay
UNITEC	Universidad Tecnologica Centroamericana
WP	Work Package