

NETWORKING LATIN AMERICA AND THE CARIBBEAN: CREATING ALTERNATIVES

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ABSTRACT

There is an ongoing process of integration of academic networks in Latin American and Caribbean countries. This papers analyzes how different factors have shaped this process and explains the main conclusions of a recent meeting in Guadalajara, México (November 1992). This process has gone through several stages of maturity for over four years and it can be said that it has not followed patterns of development observed in other regions of the world. The evolution of the effort for connecting and organizing the networks of the region is seen through the results of the different meetings where their actors and promoters have confronted their goals against the facts that condition them. There have been five regional meetings devoted to this goal (from San José, Costa Rica, in 1989 to Guadalajara, México, in 1992). The stages can be associated with several factors, one of them is the development of the national initiatives; some countries have more than one network pretending to cover the academic community and in many cases these initiatives have conflicts among them. Another factor is the support of that these initiatives have from their national councils for science and technology; some are officially backed by their governments while others are still fighting to be recognized or at least to be considered as a helpful tool for the academic sector. The participation of organizations external to the region and interested on promoting the integration process (Organization of American States, FUNDESCO, National Science Foundation, UNESCO, UNDP, etc.) has also played a decisive role in it. The initiatives of the region led to the decision, at the last meeting of academic networks for Latin America and the Caribbean, to create an open forum devoted to monitoring the process. The evaluation will be done during the annual gathering. The achievement of the defined goals will be checked against the development of specific tasks associated with the established strategies.

I. INTRODUCTION

The process of integrating the academic networks in Latin America and the Caribbean has been making decisively progress over the last years. Significant achievements can already be

regarded in this respect. The most remarkable of them in order to illustrate the above process is the creation of a "Permanent Forum for the Co-ordination of Initiatives concerning Electronic Communication Networks in Latin America and the Caribbean Countries", as part of the results of the meeting of academic networks held in Guadalajara, México (November 1992).

If the characteristics of this integration process are thoroughly regarded, some interesting elements can be recognized in order to understand it. Identifying those elements is also useful to guide the direction of one of the most successful co-operation attempts of the region.

To start analysis we will look at the meetings which have been held with the aim of co-ordinating the initiatives of the region. Through all this examination, we will remark those aspects which are relevant for the result of this movement.

The last two meetings, Rio de Janeiro in 1991 and Guadalajara in 1992, will be subsequently more carefully analyzed in order to study in depth those factors which have shaped the trend of the events in this integration process.

Finally, the current characteristics of the movement will be discussed, as well as the future developments in view of the agreements of the meeting of Guadalajara and the activities developed since then.

II. ANTECEDENTS: FROM COSTA RICA TO CHILE VIA SPAIN

The Organization of American States (OAS) and the National Science Foundation (NSF) summoned a seminar on networks (June 1989), which was held in San José, Costa Rica. That meeting is considered by consensus as the origin of the integration process of networks in the region. Representatives from networks in Latin America, the Caribbean, USA and Europe were invited; and the possibility of establishing a computer network among the researchers of the region was discussed there.

The meeting of San José caused the creation of what is called "Co-operation with Latin America for Normalized Computer Networks" (CLARIN); initiative led by the Fundación para el Desarrollo de la Función Social de las Comunicaciones (FUNDESCO) of Spain. Under this co-operation

approach set up by CLARIN, a meeting was held in Seville, Spain (October 1990). Representatives from some networks of the region were present at it (most of them had been in the meeting of Costa Rica), there they produce the-"Declaración de Sevilla"(1) to collect the results of the work.

One of the key points of this "Declaración" was the creation of a managing committee for the Interconnected System of Academic and Scientific Computer Resources (Sistema Interconectado de Recursos Informáticos Académicos y Científicos), called SIRIAC group. This committee was proposed to be an institutional negotiator before the multilateral organizations in order to develop integration projects of networks in the region. Thus, having FUNDESCO and OAS support, a new meeting was held in Santiago de Chile (March 1991). There, the first open meeting to guide the project of a data transmission network for science and technology in LA&C was organized. With the purpose of achieving that objective, two commissions were appointed to formulate the organizational and technical directions, under which the initiative for a regional network would be structured.

In short, this preliminary stage of the regional integration process of networks was characterized by the presence of a heading group, which participated in Costa Rica and continued working under a summon system focused in a small but important group of initiatives for national networks in the region. A common element among the initiatives involved in these meetings is that almost all of them were supported by their National Council of Science and Technology (NCSTs). OAS, NSF and FUNDESCO were the organizations in charge of promoting the first steps of the process, where a regional entity is structured to institutionalize the task of co-ordinating the networks integration.

Thus, the following meeting was established to present the progress made in areas such as: organizational mechanisms, future technical activities, structure of a backbone for LA&C and required strategical applications.

Finally, it is necessary to recall that this process is simultaneous with the consolidation of INTERNET as an organization integrating the academic networks of the world. In consequence, the guidelines for this integration process are being established. It is interesting to point out that at the First INTERNET Society Conference, held in June 1991 (INET'91, Denmark), there was a session devoted to Latin America, and five out of the six planned papers presented there were from people related to the SIRIAC group, and the sixth one was a regional alternative initiative, known as

REDALC (Network for Latin America and the Caribbean); project led by the Unión Latina and financed at the time by the EEC.

III. CREATING ALTERNATIVES: FROM BRAZIL TO MEXICO

A key element to understand what has happened since the meeting of Rio (October 1991) is to assess that it was an open meeting. The "First Interamerican Networking Workshop" was organized by the OAS and the Conselho Nacional de Desenvolvimento Científico y Tecnológico (CNPq) of Brazil. The NSF, UNESCO the Unión Latina, the Panamerican Health Organization (PHO), FUNDESCO, the United Nations Development Program (UNDP), IBM and LASPAU also participated as co-promoters.

The invitation was distributed through the networks of the region and an electronic list was even created to inform in detail above the event. More than 110 delegates- both representatives of around fifteen countries of Latin American and the Caribbean and delegates of promoting organizations of the event- attended the meeting. It is worth remarking the reception of it; the organizers had estimated that forty people would attend it.

Simultaneously with this event, in the same place and in a co-ordinated way, UNESCO and the Academia de Ciencias de América Latina (ACAL), as part of the REDALC project, sponsored the Regional Meeting on Information and Research Systems in Latin America and the Caribbean. In this meeting there were people whose tasks were to provide information services about the work of the scientific and technological sector in the region. Approaching this two groups -developers of networks and producers of information- and making them to complement each other successfully were a way of significantly improving their tasks. Unfortunately their interaction was not as good as expected.

The success of the open meeting in terms of number of participants had relevant consequences. One of them was the diversity of organizational and technical developments of national networks in the countries of the region. The national projects development depends on the availability of human, technical and financial resources, which are different in each one of the LA&C countries. There were representatives of national projects, which were completely defined and developed, as well as representatives of incipient initiatives which at the time were still to become reality. Obviously. at that moment there were nations- and there are still some now- without developed internal projects, but that fact does not exclude

them from participating in the discussions about a regional network, which they would eventually belong to.

Another characteristic of the meeting of Rio was the presence of representatives of national initiatives which were competing among them. In some cases, this competition is quite hostile. The kind of support they receive from their respective NCST is an important factor to explain the current level of co-operation among the internal initiatives of each country, when there is more than one.

NCSTs support and develop in some cases the national network as part of the official strategy of each country towards the scientific and technological sector. If there is another national project in a country, it is quite possible that they are in conflict. Also, sometimes, there is one national initiative, but it does not come from the official sector, but from one or more academic or private institutions associated with this common purpose. NCSTs' position varies and sometimes there are independent projects backed by their governments while others are still struggling to be recognized as a helpful tool for the academic sector. The latter is the situation of those countries where the official sector is not sensitized about the importance of developing this sort of projects.

Such a wide panorama was not foreseen by those actors who were present at former meetings, that is, before the meeting of Rio. As mentioned above, participants were invited and the audience homogeneity was determined by some aspects already referred to. The meeting of Rio was a starting point for the discussion about the legitimacy of each participant as representative of a country. In other terms: Who would participate in the decision making? The national initiatives? The NCSTs? What should we do when there is more than one initiative per country?

Besides, the presence of international and multilateral organizations, providers of technology and non governmental organizations (NGO), which formally participated for the first time in this process, contributed to create an environment of discussion where the possible alternatives were also wider than expected, they brought in new aspects into consideration.

The commissions created in Santiago to draw up basis-documents for this meeting did not reach their objectives. That is why no elaborated proposal was submitted to the participants. Some consider that the lack of those basis-documents endangers the possibility of reaching a consensus concerning the organizational figure to be adopted in order to co-ordinate the project of a network for Latin America and the Caribbean.

However, the lack of those documents did not affect the meeting outcomes. The situation described above, the diversity of which was difficult to foresee, allows us to affirm that it was not important how professionally able those in charge of writing the documents were, certainly they would not have been able to guess the synergy of Rio. It has been said many times that, in these region of the world, reality is further fantastic than its marvelous literature. Why would the Latin American and the Caribbean Network have to be an exception?

Participants were forced by the circumstances to held continuous conversations with the purpose of reaching an agreement. After four working days, they reached a rather general consensus, the main aspects of which are as follows (2):

- a) To establish a "Permanent Forum for the Co-ordination of Activities concerning the Electronic Communication Networks", which would be responsible for developing an academic, scientific and research network in Latin America and the Caribbean (it was not specified who the Forum members are).
- b) To appoint a work group to co-ordinate, under a strategical framework, combined and specific projects for the region.
- c) To appoint a technical group in charge of making the appropriate recommendations.
- d) To identify a series of short-term specific actions (nobody was designated to carry out these actions).

The problems to reach a consensus in such environment explain why the final agreement is so general. In the last document, the most controversial points are not clearly mentioned, such as: defining who the forum members are and establishing how the representation of each country before the new organization is determined. However, the final proposal had a clearly positive effect upon the activities that were made after Rio with the aim of integrating a network in the region.

On the one hand, that compulsory contact with the promoters of other national network initiatives eliminated some distrust present there, which were based upon the mutual ignorance of the intentions and interests of each one of the representatives. Additionally, it permitted the detection of specific sub-regional integration projects, apart from those which were considered in the final proposal. Moreover, that contact permitted the creation of a series of well-connected interpersonal relationships, and helped specially to build up an integration mechanism in Latin America and the

Caribbean, using data transmission networks.

That was the main benefit of the meeting of Rio and it becomes evident, a year later, when the II Meeting of Academic Networks in Latin America and the Caribbean was held in Guadalajara, México. There, the decisions that required consensus were easily made. It is clear that there is a co-operation platform that has already been proved over the last year.

This new meeting was promoted by the Consejo Nacional de Ciencia y Tecnologia (CONACYT) of México, OAS, UNDP and FUNDESCO. A representative from the Sistema Económico Latino Americano (SELA) was present at the meeting as well. The above mentioned meeting was also attended by about fifty people from nineteen countries of the region.

The criterion used to call for participation was to send an invitation to the NCSTs of each country. This decision was made in that way due to the fact that CONACYT, the organizer, delegated to its peers the responsibility for appointing the representatives of each country. Thus, some national and regional network initiatives were excluded from the event because they were not supported by their official organizations for science and technology. Nevertheless, many of these initiatives were directly or indirectly in the meeting and demonstrated how convenient is to keep an open attitude when this sort of meetings are summoned. The work group created in Rio submitted a basis-document, where organizational goals and objectives were defined and a discussion about future strategies was proposed. The result was relevant agreements on each one of the aspects studied.

The organizational strategy, which was supposed to be one of the most controversial points, was discussed and a consensus was easily reached in order to continue the tasks of the "Permanent Forum for the Co-ordination of Activities concerning the Electronic Communication Networks" created in Rio; promoting in this way the wider possible participation of regional organizations and institutions able to contribute with the objectives and actions agreed upon (3). This open organization approach shows the disposition of the region to consider development alternatives in an environment that promotes the creative incorporation of all the actors involved.

The disposition to co-operate in the integration process of networks is evident through the number and quality of current and future activities. Specific people were designated as responsible for

initiatives and countries and for carrying out all these tasks. As far as the progress is concerned, it will be annually evaluated at the Forum meetings. Considering the movement existing on the electronic list, ENREDO, created to help in the co-ordination of these particular tasks, it is obvious that people are working enthusiastically in this project. It is encouraging that one of the tasks where a greater movement can be appreciated is the training of human resources to develop and manage networks.

The hemispherical coverage of the integration effort is showed through the existence of sub regional projects which are extended all over the Latin American and the Caribbean regions. The Southern countries (Argentina, Chile, Paraguay and Uruguay) as well as Brazil are handling various interconnection projects among them. In Central America, most of the countries will be connected to INTERNET via Costa Rica. The connection with Honduras, El Salvador and Guatemala is planned to be via Nicaragua. CUnet is also an initiative the aim of which is to link all the countries from the Antilles. The member countries of the Andean Pact (Bolivia, Perú, Ecuador, Colombia and Venezuela) are also working in their interconnection project. All the countries have showed an interest in facilitating the integration of Cuba into the region.

IV. CONCLUSIONS: TOWARDS A REAL INTEGRATION

This meetings have allowed the consolidation of a network for Latin America and the Caribbean involving a large number of projects, institutions, countries and people engaged in providing a tool to the region with the aim of co-operating with its academic, scientific, technical, social and cultural development. This commitment results in a variety of projects which are progressing constantly and are supported by important international organizations.

The development of the integration process of LA&C networks requires an open co-ordinated organization and not a close structure, as RARE or any other regional network. The most important aspect shaping this situation is the lack of comprehension on the part of some NCSTs with regard to the meaning of a tool of this kind; and that deficiency has influenced and differentiated their roles in the process. Obviously, if different variants appear in the future, another type of organization might be adopted.

It would be also positive to accept the co-operation provided by multilateral organizations or international cooperation organizations. That would increase the possibility of negotiating and

obtaining the best alternative solutions available. This approach to the process of technology transference caused by developing a network for the LA&C countries is quite compatible with the principle of interoperability recommended by INTERNET.

There has not been hitherto too much emphasis on satisfying the final user and developing information products according to the regional requirements. However, as long as the initial problems have been overcome, new specific projects have appeared in order to respond to those aspects. It is possible that new initiatives arise in the future meetings of the region, thus the LA&C network will be improving as a useful tool for the development of these countries.

Beyond the formal agreement signed at the end of each meeting, the integration is in fact building itself up with the contribution of a group of people of this continent, which works to create links among the countries.

V. REFERENCES

- 1) This document appears in Roberto Lorán S. and Rafael Perez Colón "La red CUNet y la integración académica del Caribe", taken from "Calidad, tecnología y globalización en la educación superior latinoamericana", published by UNESCO-CRESALC, Caracas, 1992.
- 2) Taken by the draft of conclusions of the Meeting of Rio de Janeiro, Brazil (October 1991).
- 3) The final report of this meeting has been distributed by CONACYT of México.

BIOGRAPHICAL SKETCH

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