

Final Reflections about eLAC2007

A plan of action for Latin America and the Caribbean
October, 2007

www.eclac.org/socinfo

NEWSLETTER N°3 FOR EL SALVADOR

CONTENTS

<i>Lessons learned from the Regional Plan of Action eLAC2007</i>	02
<i>President of El Salvador emphasizes the challenge to reduce the digital gap</i>	09
<i>The II Internet Governance Forum. A vision from the Governments of Argentina and Brazil</i>	09
<i>Reports of the eLAC2007 Working Groups</i>	11
<i>Monitoring of eLAC2007 points to progress and major challenges</i>	25
<i>@LIS: Lessons learned from four years of European-Latin American collaboration on the Information Society</i>	28
<i>Heads of State and Government highlight the importance of ICT and eLAC2007 for regional development</i>	30
<i>Experiences and future plans for Digital Inclusion in LAC</i>	31
<i>Investment in ICT is important for economic growth of Latin America and the Caribbean</i>	34
<i>eLAC Policy Priorities Delphi: participative policy making for the development of Latin American and Caribbean Information Societies</i>	35
<i>The Digital Solidarity Found will finance two projects of the region</i>	37
<i>Recent publications</i>	38
<i>Regional progress in creating indicators for ICT access and use</i>	40



Lessons learned from the eLAC2007 Regional Plan of Action

The eLAC Regional Follow-up Mechanism, comprised of Brazil, Ecuador, El Salvador and Trinidad and Tobago, provides an assessment of the eLAC2007 process and its innovative features, including experiences in implementing the plan. In hopes of furthering discussions on new regional agreements, four conclusions are presented. (More on page 2)



Reports of the eLAC2007 Working Groups

The 10 Working Groups present the final reports. The large number of activities includes developing research to extend knowledge in critical areas, events, seminars and virtual dialogue. The remaining challenges are presented here. (More on page 11)



OSILAC

Monitoring of eLAC2007

OSILAC (Observatory for the Information Society in Latin America and the Caribbean) presents a report with 100 charts and 42 tables, outlining the region's situation with regard to the various goals set forth in eLAC2007. In general, the region has advanced significantly, though in certain areas there has been insufficient progress, thus revealing major challenges demanding additional attention. (More on page 25)



@LIS and ICA-CEA: Lessons learned from extensive experiences with regional collaboration

Over the last several years, the European Union @LIS project and the Canadian ICA-CEA developed pilot projects, assisted in the creation of networks and disseminated experiences regarding the role of ICTs for development. A number of conclusions of these wide-ranging experiences are presented as well as the new plans of the Canadian cooperation. (More on pages 28 and 31)



eLAC Policy Priorities Delphi

Between April 2006 and September 2007, the eLAC Policy Priorities Delphi received 1,274 online contributions from experts around the region, as well as input from over 180 personal dialogues. This serve as input for a new Regional Plan of Action for the period up until 2010. The process is the most extensive online exercise in participatory policymaking in the history of Latin American and Caribbean intergovernmental processes. (More on page 35)



UNITED NATIONS



EUROPEAID
CO-OPERATION OFFICE

ECLAC



Lessons learned from the Regional Plan of Action eLAC2007

Regional Follow-up Mechanism of eLAC2007

Brazil, Ecuador, El Salvador and Trinidad and Tobago

The time has come to focus on the lessons learnt from the implementation of the Regional Plan of Action eLAC2007 and to plan for the future. The Regional Ministerial Conference about Information Society in Latin America and the Caribbean, eLAC2007 (El Salvador, 6-8 of November 2007) will review the achievements and challenges and regional authorities will decide on next steps. This article offers an assessment from the point of view of the Regional Follow-up Mechanism of eLAC2007, formed by Brazil, Ecuador, El Salvador and Trinidad and Tobago, including comments from its technical Secretariat drawn from ECLAC's Information Society Programme. We would like to ponder on the nature of eLAC process and its innovative characteristics, as well as the experience of the implementation of the eLAC2007 plan and the related Working Groups. In the end, four conclusions are drawn, through which we hope will contribute to the discussions as well as towards the new regional agreements to be subscribed in El Salvador and in other regional and international processes of similar nature.

eLAC2007: An innovative contribution to multilateral cooperation

More than 800 participants from civil society, private sector, academia and public authorities gathered in June 2005 at the Latin America and the Caribbean (LAC) Regional Ministerial Conference, preparatory to the World Summit on the Information Society (WSIS) to adopt the Regional Action Plan: eLAC2007. The plan fills a gap in the multilateral development agenda of the region that has been created by the arrival of digital Information and Communication Technologies (ICT). It seeks to strengthen regional cooperation and integration through the adoption of ICT for development. ICT is a cross-cutting technology and as others before it, such as electricity or motorized transportation, is at the heart of myriad transformations of social and economic organization that are leading entire societies into the digital age. eLAC2007 is a new type of regional agreement, in terms of its style, scope, issues covered and participating agents. The agenda covers a cross-sectoral and multidisciplinary topic that impacts the most diverse aspects of development. Its working style emphasizes the design of technical proposals with a monitoring system,

rather than an overtly political approach where initiatives are mainly declarative. Governments maintain the leadership role in the process of elaborating and implementing a public policy agenda, but they facilitate participation of new non-state actors, such as private sector companies, civil society, academia and international organizations.

Global ambitions, local demands and a regional learning process

eLAC2007 is elaborated in the context of a long tradition of multilateral collaboration from the 1990s. Within the global governance institutional network, the United Nations has developed an institutional innovation in the 90s: the holding of informal meetings of high level representatives in the form of World Summits regarding pressing issues of social development. The Millennium Summit established the Millennium Development Goals (MDG), derived from the Declaration of September 2000, which constitutes in the words of the former UN General Secretary Kofi Annan: "a clear set of priorities and precise development goals to be fulfilled within set deadlines", becoming "a common normative framework to the whole United Nations system". The commitment to a common understanding is not born from a previous harmony of interests, but rather cooperation emerges in circumstances of differentiated but convergent interests oriented to shared goals. In other words, the commitment to these kinds of international strategic alliances is based on the conviction that coordinated and concerted action can achieve greater results than isolated action on its own, without the need for individual participants to give up their own particular interests.

The World Summit on the Information Society (WSIS) was the most recent thematically oriented global summit of this kind. It was held in two phases: Geneva in 2003 and Tunis in 2005. From Geneva came the Declaration of Principles and the Plan of Action while Tunis produced the Tunis Commitment and the Agenda for the Information Society. As part of this global process, the responsible authorities from Latin America and the Caribbean met several times to create a regional perspective and shared vision on the development of embryonic Information Societies. From the beginning of the process, they emphasized that the structural characteristics of the region require active public policies and that allowing



“the evolution of the information and knowledge-based society to be guided solely by market mechanisms entails the risk of an amplification of the social gaps existing within our societies, the creation of new modes of exclusion, an increase in the negative aspects of globalization and a widening of the distances between developed and developing countries” (Declaration of Florianopolis, June 2000). Several meetings of the regional network of the UN ICT Task Force during 2001 pointed to the importance of multi-stakeholder collaboration in this challenge and the Agenda for Connectivity in the Americas and Plan of Action of Quito emphasized the need for realistic national agendas and strategies in 2002. The Declaration of Bávaro in 2003 is seen as a major step in crystallizing the Latin American and Caribbean set of key principles that are fundamental for the transition to Information Societies and helped to identify the pivotal regional characteristics of this global phenomenon. The impact of the document has been far-reaching: for example it was through this document that the discussions on Internet governance and open-source code standards have been formally introduced to the WSIS process for the first time. Both topics have since become major issues in WSIS Geneva, WSIS Tunis and beyond.

During the preparatory meetings for WSIS-Tunis in 2005, which took place in Quito in May 2005 and at the Rio de Janeiro Regional Ministerial Conference in June 2005, several years of dialogue on the relationship between ICT, growth and equity culminated in the Regional Plan of Action known as eLAC2007. Being the natural result of a constantly maturing learning process, the Action Plan constitutes a turning point for the regional governance of Information Society issues. Being confronted with 167 global action points that the WSIS ambitiously delineates for the year 2015, the basic idea behind eLAC2007 was to identify the most urgent and important short-term goals for the region. The result was a selection of 30 goals and 70 very concrete activities to be implemented during 2005-2007. eLAC2007 is therefore a regional action plan whose purpose is to mediate between the ambitious goals of the global community and the local demands of individual countries by identifying common regional priorities. It recognizes the eminently dynamic and short-lived character of ICT, the need to stay realistic and the importance of making firm steps towards the long-term goals of the MDGs and WSIS which converge in 2015. The short-term nature of this eLAC process gives the region the opportunity to review their goal fulfillment and reformulate the objectives along the way, strengthening the provisions or introducing significant changes.

The Regional Follow-up Mechanism of eLAC2007 defended this position and presented it in regional intergovernmental forums. The Thirty-First Session of the United Nations Economic Commission for Latin America and the Caribbean, Montevideo, 20-24 March 2006, adopted Resolution 629 (XXXI) “Follow-up to the Plan of Action

for the Information Society in Latin America and the Caribbean”. It officially recognizes eLAC2007 as a first step in the completion of the 2015 goals of the MDGs and WSIS. It applauds the offer of the government of El Salvador to evaluate the plan in 2007 and asks the ECLAC secretariat to “provide support to the countries participating in eLAC2007 in the organization of a regional follow-up meeting to assess the application of the Regional Plan of Action and renew it within the framework of the process aimed at achieving the Millennium Development Goals and the targets and goals set out in the Plan of Action of the World Summit on the Information Society”.¹ In sight of the renewal of the plan, some more reflections will be made about the nature of this first milestone.

A meta-platform to face a multi-sectoral challenge

Building inclusive and productive Information Societies requires a broad range of public policy interventions that call for a collaboration of all sectors of society. The complexity of the task and the transnational character of information networks require establishing multilateral strategies of action to impel and govern the integration of our countries into Information Societies. In this context, WSIS developed a specific multi-stakeholder approach that went beyond previous World Summits. During successive World Summits in the nineties, governments increasingly recognized that civil society organizations and private sector companies are valuable partners who raise multilateral governance effectiveness and legitimacy, recognizing different degrees of participation. During WSIS, non-state actors were allowed to speak and participate in not only the High Level segment, i.e. the Ministerial-level and Summit-level meetings, but also in the Preparatory Process in working groups and informal open-ended meetings, where most of the negotiations on the terms of the agreements to be adopted took place. Thus, the WSIS process made provisions for extensive consultations with civil society, academia and business representatives.

In the same spirit, the countries of Latin America and the Caribbean created a meta-platform for collaboration with eLAC2007, which recognizes the multi-sectoral and decentralized nature of the digital revolution. The plan itself does not rely on its own financial resources, apart from the administrative contribution ECLAC has been able to provide thanks to the financial aid of the @LIS project of the European Commission. Most of the activities enlisted in the Regional Plan of Action have already been ongoing for several years and have their own financial resources stemming from private and public sources. eLAC2007

¹ Resolution 629 (XXXI), Report of the Thirty-First Session of the Commission, Montevideo, 20-24 March 2006, <http://www.cepal.org/pses31/>.



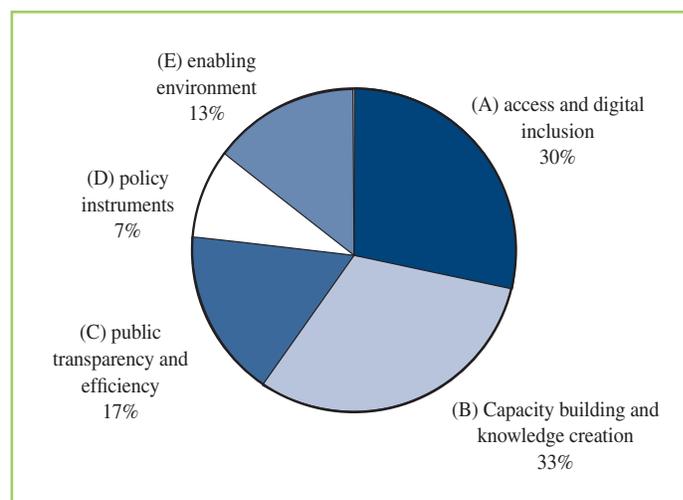
highlights and recognizes the valuable work of these regional initiatives and draws attention to the ongoing efforts to prevent duplication of efforts and synergies. For example, the e-Government Network of Latin America and the Caribbean (RedGeALC) leads goal 15 of eLAC2007, the Latin American Cooperation of Advanced Networks (RedCLARA) figures as an important effort in goal 10, the Regional Library of Medicine and Health Sciences (BIREME) renews its longstanding commitment to ICT in goal 17 and the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) draws attention to the important work done by statistical entities in goal 26. The resulting meta-platform for coordination gives room for important synergies and the prevention of duplication of efforts. This can release scarce resources that can be used to encourage the launch of new initiatives.

Besides these kinds of action-oriented goals, eLAC2007 agrees on measurable goals that represent the lowest common denominator for every member of the Latin American and Caribbean Information Societies. These result-oriented goals aim at very concrete benchmarks and basically point at minimum ICT access levels for the year 2007, independently if they would be achieved through public or private efforts. The accompanying monitoring effort helps to identify which countries are in a position to provide assistance to other nations that are looking for best practices.

In this sense, the coordinated action formulated through eLAC2007 moves away from the traditional notions of regional agreement, cooperation and integration. It establishes a new methodology in its approach to issues, coordination mechanisms and participants. This new multilateralism—although still rudimentary, incomplete, uneven and fragmented—is opening channels to enable various sectoral voices to collaborate with state representatives in shaping a complex multilateral environment. This new approach further recognizes changes in the way the relationship between state and societal actors is regarded and, thus, in the way dialogue between the two is managed. In this sense, a large part of eLAC2007 activity has been carried out by non-state actors, in collaboration with governments. Of course, the final word on the nature of the resulting consensus and priorities should be endorsed by the people itself, as the ultimate legitimization of any kind of power in a democratic system. In representative democracies, such as those found in Latin America and the Caribbean, elected governments represent the people.

In summary, there is convergence in the way this thematic agenda is addressed, utilizing a multi-sectoral approach to an integrated human development that combines contributions from the “bottom up” (from specific stakeholders such as civil society, private sector institutions and academia) and also “top down” (from democratically legitimized bodies,

Distribution of 1541 ICT-projects registered in PROTIC.org according to eLAC2007 thematic areas



such as national governments, inter-governmental agencies and the United Nations system).

The implementation of eLAC2007

The implementation of eLAC2007 naturally draws upon different initiatives by national authorities, international and regional agencies, civil society and the private sector. The Inventory of Information and Communication Technology Projects for Latin America and the Caribbean (<http://www.PROTIC.org>) registers more than 1,500 ICT-related projects that exist in the region. Although it does not claim to be a complete and exhaustive database, this inventory shows a significant activity in all five thematic areas of eLAC2007, namely (A) access to technologies, (B) capacity and knowledge, (C) public transparency and efficiency, (D) policy instruments and (E) the enabling environment (see Graph). The need for exchange of best practices and experiences in this multi-sectoral challenge is evidenced by the fact that the PROTIC.org database receives up to 100,000 visits each month.

Some selected goals of eLAC2007 will be reviewed below. The review will start with the presentation of advancements of some of the quantitative goals (result-oriented goals) and then assess the activities associated with the promotion of regional projects and the enhancement of knowledge in critical subject areas (action-oriented goals).

Monitoring eLAC2007: important advances and remaining challenges

The countries of the region asked ECLAC, in its function as a technical secretariat to the eLAC2007 process, to take up the task of monitoring



the implementation of the Action Plan. In response to this mandate, two benchmarking reports have been elaborated November 2005 and September 2007 by OSILAC (Observatory for the Information Society in Latin America and the Caribbean), which have been possible thanks to the financial contribution of the Institute for Connectivity in the Americas of the Canadian IDRC and the @LIS project (see <http://www.cepal.org/SocInfo/OSILAC>). Both reports show impressively that important advances have been made, but that the scope, speed, dynamism and potency of the digital revolution is even more powerful, often too powerful. Despite remarkable advances, serious challenges remain for the region. A more detailed report can be found in this Newsletter.

One of the lessons learned from the monitoring exercise points to the formulation of results-oriented goals in the Action Plan. The idea behind the formulation of quantitative goals is the introduction of some average standards of living for the members of the Latin American and Caribbean Information Societies. The measurement of the respective advances illustrates that neighboring countries with similar constraints show different stages of advancement. The comparison of the progress points to best practices and shows countries in search for improvement where to search for potential technical cooperation. The heterogeneity between the advancement of ICT aspects in different countries is therefore often a catalyst for change, as it provides the basis for regional collaboration. The exchange of experiences among societies with relatively homogenous cultural and socio-economic characteristics contributes to the optimization of scarce resources.

The eLAC working groups: important lessons to be learned

The synergies that can be created by the regional coordination of sparse resources of existing regional projects and networks can be used to leverage new initiatives. The fast-cycling nature of technological innovation leads to a continuous need in all countries of the region to deepen understanding on several of the protean challenges on constantly changing ICT agenda. The region trusted to El Salvador the consultations within the region – from November 2005 to June 2006 - towards the establishment of the Working Groups agreed in the eLAC2007 Plan of Action. This led to the initial creation of seven working groups:

1. Telework (goal 5 of eLAC2007 coordinated by Argentina)
2. Alternative Technologies (goal 7 coordinated by Colombia)
3. Software (goal 8 coordinated by Brazil)
4. Creative Industries and content (goal 13 coordinated by Argentina)
5. e-Government (goal 15 coordinated by Nicaragua)
6. Financing (goal 23 coordinated by Argentina)
7. Legislative Framework (goal 25 coordinated by Peru)

One additional working group not considered as such in eLAC2007 was established during these consultations:

8. Advanced Networks (goal 10 coordinated by Uruguay).

At the request of a country to the Regional Follow-up Mechanism (formed by Brazil, Ecuador, El Salvador and Trinidad and Tobago), two additional working groups have been established, which are neither foreseen explicitly in the eLAC2007 document:

9. Internet Governance (goal 14 coordinated by Argentina)
10. Regional Infrastructure (goal 1 coordinated by Uruguay) were created at :

The technical secretariat of eLAC2007 (ECLAC) circulated this proposal with all National Focal Points and they could assign up to three national representatives to each group. The selection of this group of participants was made by the National Focal Points. Some countries appointed public officials, while others, in what turned out to be a very proactive step, accredited national experts from the private sector, NGOs and academia. The reports of the activities and results of each of these groups are presented in this Newsletter. In the following we focus on some of the generic lessons learned from this process.

As a first step, the countries of the region asked ECLAC, in its function as a technical secretariat of the eLAC2007 process, to set up a virtual collaboration platform. Stakeholders argued that eLAC2007 should not only promote the adoption of ICT, but experiment with the available tools itself. Thanks to the financial contribution of the @LIS project of the European Commission, an integrated software solution was contracted to bring the Service Center for the eLAC Working Groups online at the end of 2005 (see <http://www.eLAC2007.info>).

During the last two decades, ICT tools such as email, chat, groupware, teamware or more developed content management and workflow systems have become key supporting elements for collaboration projects or teams in a dispersed setting. eLAC2007 Working Groups faced special challenges since they are composed of members from different organizations, diverse cultural, educational or linguistic backgrounds, different levels of interests and motivations, or even diverging interests. ICT based collaboration tools can not only help facilitators to engage a group in a complex collaboration project, surpassing the limitations of time and space, but can also be a simple way to help groups do small and easy tasks together in a better way. For instance, by gathering ideas before a face to face meeting (using brainstorming or survey tools), participants can be informed and share opinions already before the start of the physical meeting. The most complex version of groupware tools are those integrated within a virtual collaboration space. They offer basic



forums for interaction and exchange, but in addition constitute a platform that integrate other generic tools (discussion forums, chat room, bulletin boards, calendars, libraries, among others) and specific applications for collaboration (prioritization, categorization and voting tools, document co-author systems, collaborative argument-mapping, among others). In order to ensure optimum support for complex collaboration processes in a dispersed setting, different types of ICT tools have to be applied within an integral conceptual framework that combines virtual and in-person meetings, voice and text communication, real-time and asynchronous collaboration, as well as closed and open dialogues.

The activities of the Working Groups combined the virtual dialogues with seminars and face to face meetings. Such as mandated by goal 23.1 of eLAC2007, the Working Group on Financing carried out a survey “to evaluate national and regional needs for financing ICT development”. The questionnaire was elaborated by the group internally, led by its coordinator Argentina, and then circulated throughout the region. 358 participants responded and provided interesting insights. Education and ICT in schools resulted as the most important financial priority, even surpassing the creation of basic infrastructure, which might have been expected to be the most recourse intense challenge. The creation of capacities figured as the third priority for the financing of the Information Society. Other working groups contracted consultants to carry out specific studies, which were then shared through the virtual library. The Working Group of Legal Frameworks, led by Peru, jointly elaborated Terms of Reference and selected a regional expert to take inventory on existing legislation in privacy and security issues, electronic contracts, cyber-crime and digital signature. The Working Group of Telework, led by Argentina, did the same and presents the results of its work in a in-person meeting, the Second Iberoamerican Congress of Telework (Buenos Aires, September).

Such synergies and collaborations with already existing forums proved to be most productive and effective. The Working Group on e-government, led by Nicaragua, relied heavily on the existing Network of Electronic-Government of Latin America and the Caribbean (RedGeALC). In accordance with the mandate of goal 15.2 of eLAC2007, the Group’s aim was to “elaborate an agenda of priorities for the implementation of interoperability standards for e-government services”. ECLAC, OAS, ICA-IDRC and IADB contributed a comprehensive study on the topic, which was finally adopted by the group as a draft White Book for e-government interoperability in Latin America and the Caribbean in two workshops in Colombia (November 2006) and Costa Rica (May 2007). As can be seen, the synergies created with the existing networks allowed the group to advance a lot further than initially envisaged. The existing structure of RedGeALC and the collaboration of the four participating regional institutions enabled progress beyond a mere agenda of priorities

to the development of a comprehensive a White Book. Similar scenarios apply to the Working Group of Advanced Networks and its collaboration with RedCLARA, the Working Group on Regional Infrastructure and its ties to LACNIC and the Working Groups on Legislative Frameworks and its use of the Alfa-Redi network. This collaboration fits the spirit of being a meta-platform for coordination and it is worthwhile to point out that the three last examples just mentioned rely on private sector and civil society networks that exist in the region.

There are several lessons learned from the experience of the Working Groups. First of all, the Working Groups required a considerable amount of time to be constituted and to design and decide on their individual work plans. This assured an adequate representation of all countries, in-depth discussion to interpret how to fulfill the specific mandate of eLAC2007 and provided a solid basis for cooperation inside each group. Nevertheless, the nature of a short-term 3-year Action Plan requires a time-bound balance between the period assigned to the constitution of Working Groups, agreement on individual work plans and their consecutive implementation. The groups that were able to rely on existing regional networks advanced much faster than the groups that had to be created from scratch. Secondly, the employment of specialized consultants was possible thanks to the financial contribution of the @LIS project of the European Commission. While interesting and valuable reports have been produced, time restrictions of Working Group members placed limits on their capacity to supervise and guide the consultants in an adequate manner. The involvement of officials from international organizations, of public and private nature, turned out to be essential to assure the production of quality products. Often these existing international agencies work on very similar issues and it was therefore natural for them to take the lead in the eLAC2007 Working Groups. Thirdly, the involvement of existing international agents of private and public nature also assured a certain degree of continuity during a period of governmental elections in the majority of the countries of the region. In conclusion, the major lesson learned is the benefits from linking the Working Groups with responsible international agencies and networks. This does not exclude the leadership of a specific country in a certain topic, but maximizes existing human capital, availability of time and resources.

Another important learned lesson comes from the benefit of combining face-to-face meetings with the possibilities provided by virtual dialogues. The eLAC2007 virtual dialogue platform was especially useful in providing a common information space of documents and reports and to carry out far-reaching opinion surveys throughout the region. The eLAC Policy Priority Delphi about ICT priorities for the year 2010 has been a model for multi-stakeholder participation. More than 1,400 contributions have been



made by experts throughout the region and 14 international agencies contributed actively in the exercise that involved online and offline collaboration. The process consisted of three rounds of online surveys, which resulted in 1,274 online contributions from almost every country of the region, as well as personal interviews with more than 150 representatives of the public, private and academic sector and the civil society. The importance and contributions of the multistakeholder approach have become visible especially through the virtual forms of participation. Most participants of this exercise of participative policy making have been from the private sector (39%), around 25% from the public sector, 24% from the academic sector and 12% self-identified themselves as civil society (NGOs). The process and its results are presented in a report that serves as basic input for the negotiations of a new Regional Plan of Action. It has to be pointed out that in this first phase, the Working Groups, the Regional Follow-up Mechanism and the technical secretariat only made incipient use of the most basic ICT tools of the virtual collaboration space, such as online libraries and questionnaires.

Conclusions and recommendations

The experience of the last three years has led to various insights. Many have been positively surprised with the seriousness, commitment and speed of countries to execute a Regional Action Plan on such a new and innovative topic. While Latin America and the Caribbean have a long tradition of various regional plans related to a variety of pressing issues for development, not many of them have achieved such a level of activity, accompanied with such a intense follow-up and monitoring effort in such a short time-frame as eLAC2007.

We consider that several facts contributed to this success. First of all, ICT have proved to be a cross-cutting technology which directly or indirectly impacts the daily life of all people in our region. The fact that in less than a decade every second inhabitant of our region is communicating through a mobile phone shows the great potential of these tools to impact positively social cohesion. Secondly, in contrast to other controversial issues of the development agenda, it seems that the use of technology for development does not face serious political controversies. International cooperation and exchange of experiences in this aspect of development is very welcomed by most governments and other stakeholders. Controversies might arise over very particular issues, but the overall desire for collaboration is never questioned. The use of technology for development turns out to be a very adequate topic to foster and accelerate regional integration and cooperation in Latin America and the Caribbean. Third, contrary to other plans, eLAC2007 is a short-term action plan with concrete and measurable goals in a manageable timeframe of three years. This possibility of seeing the

fruits of the work as being well within reach is useful when involving and committing authorities to the process. Fourth, the multi-sectoral nature of the topic naturally led to the design of a meta-platform. This assures that the plan does not lose touch with the reality on the ground, but minimizes duplication while creating synergies. Last but not least, the catalyzing resources of donations from international cooperation agencies, especially from the European Commission with its @LIS project and the Canadian cooperation IDRC with its ICA initiative, as well as the political visibility and awareness-raising process of the World Summit on the Information Society, largely facilitated the work. Attention needs to be drawn that all three of these facilitators do not constitute permanent features and their eventual absence in the upcoming years might complicate the process.

We now present four major conclusions that might be considered during the regional deliberations at the Regional Ministerial Conference on the Information Society in Latin America and the Caribbean, eLAC2007, in El Salvador, November 2007:

1. Regional Follow-up Mechanism and National Focal points turned out to be crucial and should be strengthened

The monitoring work of the Regional Follow-up Mechanism formed by Brazil, Ecuador, El Salvador and Trinidad and Tobago turned out to be vital to the implementation of the Regional Action Plan. The Regional Follow-up Mechanism came to reality, in conformity with goal 27 of eLAC2007 and based on an initiative of Ecuador and El Salvador. Technological progress and the countless activities in the different countries require constant coordination. Record keeping is critical in a field of work where dynamic uncertainty is the name of the game. The appointment of national focal points facilitated communication on a multi-thematic topic and the involvement of the Ministries of Foreign Affairs has often been essential in order to organize and maintain a coherent international dialogue among the many authorities in different countries. While the benefits of the multi-stakeholder approach are obvious, the inter-governmental structures and mechanisms are indispensable in mainstreaming this increasingly essential topic into the regional development agenda. However, it needs to be stressed that the eLAC architecture is relatively informal. It grew out of an ad-hoc response to assure the fast implementation of the Regional Action Plan. At the same time that ECOSOC decided that the Commission on Science and Technology for Development (CSTD) will act as the global focal point in the UN system-wide follow-up of the worldwide WSIS, Latin America and the Caribbean realized that it does not have yet a corresponding forum to maintain a dialogue on technology and innovation for development, which could take up this function. Formalized regional forums exist in the field of population, gender and statistical work, but



not for technology and innovation. The regional process of the recent years has underlined the importance of technological and innovation policy for development and the region was able to respond to this challenge thanks to the generous contributions of its international partners, such as the European Commission and Canada. The increasing omnipresence of technological issues in the daily life of our societies, and its unavoidable policy implications, shows however that the region could need an established regional forum to maintain a continuous dialogue on the dynamic challenge posed by technological progress and innovation for development. In the synergic spirit of eLAC2007, the existing inter-governmental structures of the region can be used to mainstream the discussion on innovation and technology into the regional development agenda.

2. Effective quantitative benchmarking and qualitative monitoring of activities are essential and need to be continued by a technical secretariat

In a field of continuous change, monitoring is essential in order to recognize progress and to be able to react to an ever-changing environment. The two benchmarking reports that have been prepared by the Observatory OSILAC of ECLAC, in cooperation with ICA-IDRC and the European Commission, are useful references and contribute to deepen the understanding of the regional dynamic. Besides, the Regional Follow-up Mechanism of eLAC2007, in cooperation with the technical secretariat, presented an annual Newsletter to show activities carried out by involved regional organizations and the Working Groups and to present current publications and international events. Experience shows that this effort contributes to the continuity of the coordination of activities of international stakeholders. It also facilitates authorities and decision makers, especially new incoming government officials, to understand the dynamic of the regional ICT-for-development community. The same accounts for new professionals of international agencies and private sector decision makers. In a multi-thematic challenge, the monitoring of activities contributes to continuity of activities independently from personal linkages. It seems worthwhile to strengthen this effort through a more frequent publication of a monitoring newsletter. This should feature information about activities and major projects in the region, events and Conference results, as well as opinion articles of different agencies and decision makers and to showcase recent publications related to Information Society development. Together with the quantitative monitoring of the benchmarking reports, this will assist all stakeholders of the Regional

Plan of Action eLAC to follow-up with the myriad activities constantly ongoing in the region.

3. Virtual collaboration has great potential for regional collaboration and should be strengthened

The use of virtual dialogue tools shows great potential for regional coordination. The cost saving technology is not a panacea, but strengthens communication between face to face meetings and enabled the direct involvement of an unprecedented number of participants in the process. The use of the virtual platform to involve more than one thousand people in the eLAC Policy Priority Delphi about ICT priorities has become a best practice of international participative policy making in the digital age. Despite the fact that the topic should attract a technology savvy audience, until now, only very basic virtual collaboration tools have been used. The possibilities and potential contributions of virtual collaboration are still vast and can be intensified in the future.

4. Working groups can benefit from existing regional agencies and networks and could benefit from formalizing collaboration

The multi-sectoral challenge of the development of Information Societies can only be faced by a coordinated, but decentralized approach. The work of specific interest groups that grow out of the eLAC process can benefit from formal alliances with existing regional agencies and networks. This formalization of cooperation with the existing regional mechanisms is not contradictory to the desire of an individual country to lead the discussion on a certain issue. This brings synergies and the benefits of continuity and resource sharing. Besides, the formalization of such alliances could make it clear from the beginning who will report on the outcome of the work that is related to a specific eLAC goal. While results-oriented goals are easy to measure, the outcome of action-oriented goals are difficult to assess. Accountability and the ensuing assignation of responsibilities for the completion of a goal is however indispensable if the Plan of Action is to maintain its transparent and practical nature. It is therefore suggested that the eventual creation of Working Groups should be coupled with the assignation of responsible entities right from the start. These entities might be governments, international organizations, private sector networks or civil society agencies and will frequently report to the Regional Follow-up Mechanism 



President of El Salvador emphasizes the challenge to reduce the digital gap

The President of the Republic of El Salvador, Elías Antonio Saca González, visited the headquarters of the Economic Commission for Latin America and the Caribbean (ECLAC) in Santiago, Chile, on Friday, 6 July 2007.

In his speech, the President declared: “We all are conscious of the existence of a great technological gap that divides humanity between the ones that have access to technologies, and to all its benefits and those that not. For that reason El Salvador, along with the rest of the countries of Latin America and the Caribbean, have assumed the challenge to reduce this gap through the implementation of national projects or digital initiatives, taking advantage of the historical moment of the World Summit on the Information Society. It honors us that El Salvador is the host of the Second Regional Ministerial Conference on the Information Society

where the Regional Plan of Action eLAC2007 will have its follow up. The event is organized with the technical support of the Information Society Programme from ECLAC which we are specially thankful” .

Elías Antonio Saca has a broad experience in ICT . Following journalism studies at the University of El Salvador, he began his career as a radio and TV broadcaster and a businessman, founding Radio América in 1987 and Radio Astral, the first of the nine-station SAMIX broadcasting group, in 1993. Saca joined the Salvadoran Broadcasting Association (ASDER) in 1997, holding the post of President for two periods between 1997 and 2001. He has been an active member of the International Association for Broadcasting (AIR), and President of its Permanent Committee for Freedom of Expression 



<http://www.eLAC2007.org>

The II Internet Governance Forum A vision from the Governments of Argentina and Brazil

The second Internet Governance Forum will take place in Rio de Janeiro, Brazil, from 12 to 15 November 2007. The main subject of this forum is “Internet Governance and Development” and its agenda is organized under main five issues: access, diversity, openness, security and critical Internet resources. There will also be many workshops about more specific subjects.

This forum will be a multistakeholder event with participation from governments, the private sector, academia and civil society. There, they will have the opportunity to debate and exchange ideas about the main

subjects of Internet Governance and the future of the Internet. This is the second meeting of the forum, the first of which was held in Athens, Greece in November 2006.

From a regional perspective, this forum should focus on stressing the commitment of our countries with the construction of a people-centered, inclusive and development-oriented Information Society, as agreed in the World Summit of the Information Society (WSIS).

According to WSIS, a working definition of Internet governance is



the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet. The establishment of the Internet Governance Forum (IGF), along with all other initiatives mandated by the WSIS outcomes, represents a major step towards the construction of a multilateral, democratic and transparent global Internet governance model.

The following WSIS principles provide an adequate framework to guide the involvement of the countries of the LAC region within the IGF:

1. The Internet has evolved into a global facility available to the public and its governance should constitute a core issue of the Information Society agenda (paragraph 29 of the Tunis Agenda – TA);
2. “The international management of the Internet should be multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations” (para. 29 – TA);
3. Internet governance “is an essential element for a people-centred, inclusive, development-oriented and non-discriminatory Information Society” (para. 31 – TA);
4. “Policy authority for Internet-related public policy issues is the sovereign right of States. They have rights and responsibilities for international Internet-related public policy issues” (para. 35(a) – TA);
5. “All governments should have an equal role and responsibility for international Internet governance and for ensuring the stability, security and continuity of the Internet” (para. 68 – TA).

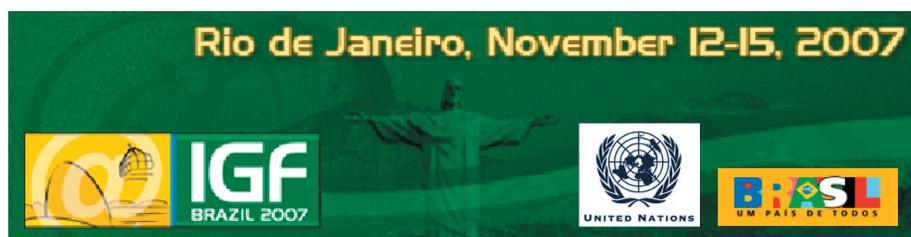
The IGF is an excellent opportunity for countries of the LAC region to receive the latest news and improvements related to Internet

Governance. In this sense, such relevant institutions as the International Telecommunications Union (ITU) and the Internet Corporation for Assigned Names and Numbers (ICANN) should actively participate in the different panels and discussions at the IGF. Taking into consideration the relevant needs and concerns of the LAC region, the following issues should be addressed in each main session of the IGF in Rio:

- (1) for the ‘access’ cluster, a discussion on international interconnection costs;
- (2) for ‘openness’, a discussion on fundamental rights in the Internet; and issues related to interoperable platforms and open standards, including free and open source software;
- (3) for ‘security’, cooperation on the efficient application of national law and international treaties related to the use of the Internet, in particular in criminal matters;
- (4) for “diversity,” protection and promotion of knowledge-sharing and local content production, including content produced with non-commercial purposes;
- (5) for “critical Internet resources”: discussion on whether relevant processes of coordination and management of critical Internet resources are consistent with the principles embodied at WSIS summit.

Balanced regional representation is essential for the legitimacy of possible recommendations that may arise from the IGF, as established by the Paragraph 78 of Tunis Agenda. The participation of representatives from the developing world in the first IGF meeting (Athens, Oct-Nov/2006) was very limited – only 5% of the participants came from Latin America and the Caribbean. It is expected that its 2nd edition in Rio favours the involvement of representatives from developing countries and the region.

More detailed information about the Second Internet Governance Forum can be found in www.intgovforum.org or in www.igfbrazil2007.br 



<http://www.IGFbrazil2007.br>

Reports of the eLAC2007 Working Groups (WGs)

Goal 5 Work

Coordinator: Viviana Díaz,
representing Argentina

Participating countries

ARG, BOL, COL, ECU, SLV, NIC, DOM and URY.



“The greatest challenge is telework legislation and regulation in LAC.”

The working group (WG) created in the context of eLAC2007 Goal 5 focused on the issue of telework, attempting to examine how new forms of work emerging from the presence of ICTs can be used in the region to contribute to development, through their impact on work relationships. Goal 5 called for creating this regional working group to encourage application of ICTs to new forms of work and telework, create local jobs, establish networks of social actors to share experiences and develop proposals for job creation (both in general and at the local level), and update information on the skills and knowledge needed to promote inclusive, sustainable development in the region. Given that ICTs are changing the world of work, as well as providing new types of jobs, a definition of telework was developed that considers the use of these technologies both as a tool for work, and as a means of making remote work a reality.

At the Second Implementation Meeting of eLAC2007, which was held in tandem with the Fourth EU-LAC Ministerial Forum on the Information Society, held on April 28-29, 2006 in Lisbon, Portugal, the initial version of the working plan was presented, along with those of the other WGs. The plan was then discussed and adopted by consensus by all members of the WG. The document highlighted the importance of public policies and regulations in promoting telework in the region; the training of teachers and auxiliary personnel capable of promoting and improving the professional use of ICTs at the national and regional levels; the identification of legal constraints; and the creation of indicators to measure the impact of telework on employment rates.

The group decided to undertake a study of “Legislation and regulations relating to telework in LAC”.¹ This was made possible by financial support that the European Commission’s @LIS project provided to ECLAC. In June and July of 2006, the group agreed on terms of reference for the study, and considered three different consultants as candidates for the job.

The consultant selected was Sonia Boiarov, whose extensive experience in the subject made her well suited to carry out the research, the results of which were presented in January 2007. This research sought to establish the general outlines of regulatory and legislative proposals in certain countries of the region, with particular focus on those where specific bills or initiatives had been designed to address these issues. For research purposes, a sample of representative countries was established.

The report emphasized, among other points, that telework is not currently a profession, but rather a means of carrying out activities under contract, either as an employee or on an independent basis. The teleworker is a person with a reasonably high (usually professional) level of training, who carries out activities with varying degrees of value added. In a number of Latin American countries, telework is viewed as an opportunity to create jobs, in the context of an employment crisis that is affecting a large percentage of the active population. However, it must be borne in mind that the particularities of this form of work require that certain changes be made in the legislation of the region’s countries.

ICTs have spawned the emergence of global labour markets that reduce the importance of geographic borders, creating a greater flow between labour supply and labour demand, a phenomenon affecting variables such as wages, forms of authority, jurisdiction, and resolution of labour disputes. This new scenario requires new regulatory models for labour relations, particularly in regard to wages. There is no wage structure in cyberspace, thus making it possible to pay a worker in a developing country less, resulting in greater unemployment, low wages and loss of work benefits.

Changes in labour relations, created by new technologies, mean that workers’ organisations must incorporate new mechanisms to protect workers—with, perhaps, the ultimate prospect of interactive strikes and virtual protests.

The skills required for telework, which are rarely provided through formal education, are just beginning to be taken into account. Critical and creative skills are needed, in addition to technical knowledge, in order to successfully participate in the information society. The certification of work skills for teleworkers could help position them to secure contracts or market their teleservices.

¹ “Informe sobre Legislación y Normativa Vinculada al Teletrabajo en América Latina y el Caribe”, unpublished, Sonia Boiarov, ECLAC.



Current legislative changes take account of variations in space and time, which are more flexible in telework than in traditional scenarios. However, the ease with which telework can become cross-border or offshore work makes regional standards a necessity for the region. A specific law on telework in each country would provide teleworkers visibility and help prevent labour fraud. As telework progresses, there are new opportunities to reach agreements on transnational issues such as applicable law, jurisdiction, and virtual mediation and arbitration. Progress on telework legislation has been achieved in Argentina, Colombia and Chile. The exportation of teleservices, the telephonic provision of services, and availability of workers are all areas in which speed, service and the hiring of workers are facilitated by the electronic environment. The more organised the region can be in addressing these areas, the more benefits workers and teleworkers will gain, leading to higher levels of social inclusion and work opportunities than would have otherwise been conceivable.

Finally, the lack of statistics on the number of teleworkers in the region deserves mention. Indicators must be created to facilitate comparisons and monitor the advance of telework in the region, and to provide for comparisons between countries.

The results of this report, and of this working group, have been presented at the Second Ibero-American Telework Congress, held in Buenos Aires the past 19 and 20 of September, 2007. This will provide a venue for discussions on the contributions that telework makes to society, the role of ICTs as a work tool in the information society, and the sharing of experiences among firms, governments and researchers .

Goal 7 Alternative technologies

Coordinator: Martha Castellanos,
representing Colombia

Participating countries

ARG, BRB, BRA, COL, CHL, MEX, PER and DOM.



“A broad gamut of opportunities and challenges for digital inclusion and development is emerging with the introduction of terrestrial digital television.”

With a view to developing alternatives and development strategies for terrestrial digital TV and other wired and wireless technologies in the region, an Alternative Technologies Working Group, coordinated by Colombia, was formed. Among the objectives of the Plan of Action of

eLAC2007 Goal 7 was the formulation of alternatives and development strategies for terrestrial digital TV and other wired and wireless technologies in the region, including studies on standards, interactivity and applications designed to provide universal access.

As a result of the fact that analog TV reaches over 90% of the region’s inhabitants, and that the great majority of these use terrestrial networks (i.e., traditional antennas, rather than cable or satellite), considerable activity is occurring in the region to address the challenge of bringing these networks into the digital age—with their concomitant benefits, such as interactivity and diversity of channels. The region’s two telecommunications fora, CITEL and REGULATEL, have organised a series of meetings and training events on this topic. In cooperation with Brazil’s Centre for Telecommunications Research and Development (*Centro de Pesquisa e Desenvolvimento em Telecomunicações*, or CPqD), ECLAC conducted a regional study of the subject. On April 23 and 24, 2007, at the initiative of the Peruvian government, an Andean Forum on Terrestrial Digital TV was held in Lima. Its objective was to stimulate telecommunications oversight bodies in the Andean Community to share information, experiences and practices to facilitate the assessment needed to implement and develop terrestrial digital TV in the member countries in a manner consistent with their individual social, economic, regulatory and technical circumstances.

Since the late 1990s, governments, broadcasters, producers of audiovisual content, industry, regulatory agencies and civil society in various countries have been participating in debates and research on digitisation of the terrestrial television platform. Despite changes in broadcast TV business models, and issues relating to the technological standards for these new models, this type of social and technical transition is inevitably accompanied by a wide range of effects.

The complexity involved becomes clear if one examines some of the issues associated with the transition, which is already under way, e.g., the plurality of service models and plans for the analog-to-digital transition; lack of consistency among the pilot countries in choices and decision-making; the prospect of new services and the entry of new agents in the televised sector’s value chain; and regulatory obstacles associated with new interactive technologies and use of the radio spectrum. The regulatory issues become even more serious when one considers that terrestrial digital TV may extend its sphere of influence, overlapping with the traditional domain of other segments, such as cable and satellite TV. Moreover, emerging technologies, such as IPTV, may also join in the battle for these overlapping sectors. These conditions pose significant problems to so-called convergence and to early efforts at regulation.



It is generally acknowledged that convergence produces new challenges, and takes many forms: convergence of information services and processing (e.g., voice and data over the same medium), convergence of telecommunications with other domains (e.g., computing and the audiovisual industry); convergence of communications platforms (terrestrial and mobile, wired and broadcast, mobile and broadcast); and convergence of service providers and network operators (triple or quadruple play). Challenges are also emerging in regard to the transition phase of convergence, giving rise to unavoidable conflicts, such as conflicts of interest and competition between different forms of distribution and delivery, as in the case of X-DSL/satellite/cable TV and terrestrial digital TV.

Unlike cases of specific service or technology platforms, which can be regulated by an entity dealing solely with that platform, convergence poses a challenge that extends beyond the technological dimension, involving markets and regulation—to say nothing of the cultural changes involved in the transition from one model to another.

In addition to this changing situation, there are opportunities for economic growth and social inclusion. Some of the region's countries believe that the introduction of new services and applications on the TV platform, with home-installed analog-to-digital converters (set-top boxes), is an opportunity to revitalise electric/electronic manufacturing and develop the software industry.

In terms of social inclusion, there is a strong demand for interactive services that could help reduce the separation between social groups with access to digital technologies and those without. The well-known digital divide is more critical in less developed countries. Here, lack of opportunities for digital access via technologies such as computers, cable and satellite create a problem of equity. The issue is currently being highlighted by the debate on the introduction of terrestrial digital TV.

At the recent Seminar on Alternative Technologies, held on August 16 and 17, 2007 in Bogotá, Colombia, there was a sharing of regional experiences. The goal was to analyse and discuss the current scenario in regard to different wired and wireless technologies, standards, interactivity, applications for providing universal access, and adoption of a terrestrial digital TV (TDT) standard. Colombia's Minister of Communications, Dr. María del Rosario Guerra, who spoke at the opening of the forum, emphasised "the importance of bringing together and seeking the commitment of different sectors—public, private, academic, business and civil society—to reduce the digital divide." Experts from Brazil, Chile, Colombia, Peru, ECLAC and REGULATEL, as well as other guests from various Latin American countries, spoke on

present and future developments in alternative technologies. Academics and researchers from organisations such as Brazil's CPqD explained technical advances that have been made in the new generation of networks and home fibre optics networks, among other technologies.

Colombia's Ministry of Communications made a presentation that included ten points for the Goal 7 WG member countries to discuss and consider in selecting a standard, namely: (1) closing the digital divide; (2) the issue of using a high-definition signal; (3) supporting the content industry; (4) new services; (5) mobility/portability; (6) multi-channel service in high and standard resolution; (7) the question of a single frequency; (8) optimising the use of the radio spectrum; (9) implementation; and (10) preventing lags in technology. Attendees also heard a presentation on the current status of digital television and related activities related to Peru's work plan.

In terms of alternative technologies other than digital TV, presentations were made on applications currently being developed, such as the use of PLC (Powerline Communications) in remote areas of Brazil, which provide connectivity for schools, municipalities, crafts businesses and healthcare facilities. It is notable that in Brazil, businesses with little historical connection to the communications sector (energy, gas and oil) have begun to provide services in the sector, with social programmes and projects that take advantage of technologies such as PLC, WiMax and satellite communications as alternatives or complements to existing technologies. Chile also presented alternative-technology applications used in its Chiloé and "Quiero a mi Barrio" programmes, among others. Some experts also stressed the importance of content delivery via satellite, use of the 450MHz frequency band for universal service applications, fibre optics in the home, and new-generation networks, all of which share the objective of reducing the digital divide 🌐

Goal 8 Software

Coordinator: Nivaldo Cunha,
representing Brasil

Participating countries

ARG, BRA, COL, CHL, MEX, PER and DOM.



"The production and use of software in the region is a key factor in creating industrial capacities and modernising the public sector in the context of the information society."

The eLAC2007 Software Working Group held a seminar in Rio de Janeiro on February 13 and 14, 2007 to discuss the opportunities and constraints of free and open-code software, share experiences, examine



the role of technology in reducing costs, and discuss the implementation of new technologies.

The country representatives presented a variety of experiences relating to software use. Brazil explained some of its current projects, such as the Brazilian Program of Digital Inclusion, the federal government's CACIC inventory of hardware and software; the government email programme known as Carteiro; measures such as the "one computer per student" initiative; and Casa Brasil. Ecuador spoke on the relationship between competitiveness and software use in the context of economic and productive revitalization. Peru explained its 2005-2008 software industry development model. An analysis of the state of free-software development in Paraguay was also presented. Uruguay introduced its recently created Agency for the Development of e-Government and the Information and Knowledge Society. Venezuela described a number of current projects in different governmental areas. UNESCO explained some of its free software and "open educational resources" initiatives. ECLAC presented some of the conclusions of research in Chile on the economic efficiency of free and open-source software (FOSS) in the public sector. The seminar adopted this group's work plan, which focuses on issues such as economic development through software production, training relating to intelligence, creative software capacities, the use of software in government, and free software.

It became clear that the software and digital services industries offer important opportunities for the region's economic and social development. Software can be a critical tool in increasing productivity in a knowledge- and information-based society, since it facilitates solutions for many types of problems. The production of software and services is an economic activity that plays a larger and larger role at the global level, and it has the inherent capacity to create thousands of skilled jobs. Though there are differences in terms of the sizes of markets, and the possibility of achieving economies of scale with productive resources, a preliminary study reported on by ECLAC indicated a number of factors common to seven of the region's countries (Paulo Tigre, Information Society Programme, DDPE, unpublished, 2007). Latin America does not yet play an important role in the world software and services industries, especially in comparison with its potential, and with the progress made by developing countries in Asia. Nevertheless, the Latin American software and services market is growing faster than the world average, and the region's industry is increasing its share of global sales.

The importance of software in economic and social development bears on two types of effects. First, this is a fast-growing, knowledge-intensive industry, with the capacity to create skilled jobs and to increase and diversify exports. Second, it provides knowledge and digital technology for the entire economy and society, and promotes productivity based

on the efficiency of digital processes. Public and private policy for the software sector should focus on the results desired, taking into account current deficiencies that constrain growth in the industry.

Consolidating development of the region's software industry requires ongoing human resources training, the formulation of public and private policy to stimulate the sector, alternative funding opportunities, regulation, appropriate incentives, promotion of local software use, domestic demand, and encouragement of exports where possible, without losing sight of the need to find segments of the world market in which sustainable areas of specialisation can be developed.

Given that there is a trend toward digital provision of services in government, greater investment in these technologies may be expected in the public sector. Thus, it becomes important to assess the advantages of different types of software. The options of free, open-source and proprietary software involve different actors, perspectives and interests. An analysis of the advantages of each should take into account not only technical and regulatory issues, but also political and economic ones.

Some advocates of open-source software point to potential savings on licenses, as well as its advantages in terms of security, privacy and transparency. It must not be forgotten, however, that open-source software is not without cost. Its implications are, above all, in the realm of transparent functioning of software. The decision to adopt a particular type of software in a given case should be based on a consideration of different licensing models, and must take legal and technical criteria into consideration. There is still a strong need for greater knowledge in this area. Too many myths remain prevalent in the region, along with uncertainty, preventing progress in an area that is crucial to the development of our information societies 🌐

Goal 10 Advanced research and education networks

Coordinator: **Ida Holz**,
representing Uruguay

Participating countries

ARG, BOL, BRA, COL, CR, CUB, CHL, ECU,
SLV, GTM, HND, MEX, PAN, PER, URY and VEN.



"The CLARA Network experiment is an example of success based on a multitude of efforts."

Since its creation in 2004, the CLARA Network has played a vital role in research and education in Latin America, linking 12 countries and 729



universities at a connection speed of 622Mbps. Over 671,986 academics, 104,607 researchers, and 3,763,142 students—a total of 4,539,735 individuals—have the potential to connect to the network. To date, the CLARA Network brings together the national research and education networks (NRENs) of Argentina, Brazil, Chile, Colombia, Ecuador, El Salvador, Guatemala, Mexico, Panama, Peru, Uruguay and Venezuela, with Bolivia due to join this year. In addition, the network provides direct connectivity with the European network GÉANT2 and with the United States' Internet2, and will soon provide connectivity via a peering link with the Asian TEIN2 network.

At the Fourth EU-LAC Ministerial Forum on the Information Society, held on April 28 and 29, 2006 in Lisbon, Portugal, CLARA was singled out by the ministers, and designated, as of April 26, as an eLAC2007 working group. Its mission was to help in achieving Goal 10, which seeks to “develop research and education networks.”

The CLARA Network emerged from a project called ALICE, which was funded by the European Commission's @LIS project. Given that @LIS is due to end in 2007, the hope is that remaining funds will make it possible to continue development of CLARA and the CLARA Network through March 31, 2008. CLARA's role has taken on new importance in light of this funding challenge, as its responsibilities for managing and administering the network increase. The notable independence of CLARA has been a factor in the institution's strength in Latin America, and has made it an increasingly important participant in designing new projects.

Since its creation within Latin America, the technical side of the CLARA Network has been handled by CLARA. At the end of February 2007, the CLARA Network's backbone was based on a ring topology connecting five nodes located in the cities of São Paulo (Brazil), Tijuana (Mexico), Panama City (Panama), Santiago (Chile) and Buenos Aires (Argentina). ALICE funded the 155-Mbps linking of the five nodes, and the 622-Mbps link between the CLARA Network and GÉANT2. The WHREN-LILA project, supported by the National Science Foundation in the United States, provided funding for two more Western Hemisphere linkages: a 2.5-Gbps link between São Paulo and Miami (the successor to the 622-Mbps link provided by the AMPATH project) and a 1-Gbps link running on a segment of dark fibre between San Diego and Tijuana. Each WHREN-LILA link provides the CLARA Network access to an international peering fabric located on the two coasts of the United States, known as the AtlanticWave and PacificWave exchange points.

In order to take advantage of reduced costs in providing the CLARA Network's international capacity, certain of the topology's links have

been removed, while others have been added, thus changing the network's configuration. The CLARA Network initially installed a new sixth node in Miami, capable of receiving new links and incorporating new connection agreements. In addition, the LAUREN initiative donated three 155-Mbps STM-1 connections, which have already been installed between Panama City and Miami, and between Panama City and Santiago. In the coming months, a Santiago—São Paulo connection is due to be installed. The presence of these three connections, along with the removal of the current STM-1 ALICE connections linking Panama City with Santiago and São Paulo with Tijuana, will complete the reorganised nucleus for the project's new phase. At the same time, an agreement with WHREN-LILA makes it possible to connect traffic from the CLARA Network's PoPs with WHREN-LILA's POPs in Miami, creating an alternative routing from the CLARA Network to the Atlantic coast structure. This agreement also supports traffic between Miami and São Paulo, closing the ring to ensure connectivity in the event that a connection between Miami and Panama City should fail. Finally, in order to save money and explore possibilities for better service, some NREN connectivity services will be restructured. The Central American NREN has been moved from the Mexico node connection to the new U.S. node (no longer financed by ALICE), while the Venezuelan NREN has been moved from the Brazil node to the Panama access point, thanks to another LAUREN donation in the form of a DS3 circuit linking Panama with Caracas, Venezuela.

The eLAC2007 Goal 10 WG conducted a survey among CLARA members, between July 6 and 25, seeking information on Latin American NRENs, and in an attempt to learn how the CLARA Network's representatives perceived the network's functioning. This information will aid in defining the future directions that the CLARA Network should pursue. Responses to the survey were handled by the technical and institutional representatives of the connected NRENs and, in some cases, by other members of the NRENs WGs, all of which belong to CLARA member countries, and only two of which (Bolivia and Nicaragua) are not yet connected to the network.

In terms of the reasons mentioned by the various NRENs for connecting to the CLARA Network, 39% mentioned “a wager on the future,” 29% “the need for advanced international connectivity,” 16% “the need for advanced intra-regional connectivity,” while 13% did not specify a motivation. A majority mentioned the need for international scientific collaboration, and almost all cited the importance of advanced networks as a platform to drive advanced research, science, technology and, consequently, innovation.

Given that time had passed since creation of the CLARA Network connections, the survey asked whether expectations had been met. The



response was generally affirmative. Comments from not-explicitly positive respondents centred on the small amount of time that had passed since the connection was established, thus making it difficult to assess the results, since many potential users in the NRENs remained unaware of the benefits that the CLARA Network could provide. These results highlighted the need to educate potential users on the use and benefits of advanced networking, the importance of explaining what applications this type of network supports, and how using the network can facilitate normal tasks or desired operations previously precluded by technological constraints. It is vital to disseminate knowledge on these issues, and this should be done not only by CLARA as a group, but also individually by each of the NRENs, since they are most familiar with their users and are in the best position to take the lead in the learning process. CLARA's relationship with the NRENs, the functioning and operation of the CLARA Network, the network operation centre (NOC), the network engineering group (NEG), the project division and the communications division all received positive marks.

In terms of the types of projects in which the NRENs expressed an interest, or areas in which they would like to develop new projects, responses focused on e-science, computer grids, education, healthcare and medicine, astronomy, remote observation, remote instrumentation, biological sciences, digital libraries and data storage. In regard to applications, attention centred on electronic media using multicast (video and voice), videoconferencing and voice over IP. With respect to social impact, respondents referenced the CLARA Network's objective of reducing poverty, particularly in rural communities, and its efforts to promote language and environmental teaching and learning.

In most of the areas identified, some work has already been carried out by the various NRENs, as well as in CLARA. Moreover, the areas identified are ones in which European and North American research is leading the way—reflecting a significant level of awareness of international trends and paradigms on the part of the CLARA community. The interest in developing e-health, e-medicine and e-education projects is an expression of the need to take advantage not only of what is considered “key” in the context of advanced networking, but also whatever is capable of advancing the region's development—e.g., the advantages enjoyed by the southernmost countries (Argentina and Chile) in the field of astronomy, due to their geography and the prevailing celestial conditions.

CLARA should be in a position to respond to these expectations and interests, which involve the development of knowledge on the part of its member NRENs, and should be able to supply the network with content and relevant data, making clear its crucial role in the region and

the importance of maintaining and extending its links with Europe, North America and the rest of the world. This is particularly important in view of the fact that the European Commission is beginning to support the creation of an advanced network in the Caribbean. ELAC2007 Goal 10.1 called for extending the network to the Caribbean, and now, three years later, it appears that the CLARA Network's knowledge may be an asset in confronting this challenge. Notwithstanding the importance of CLARA's near-term responsibilities, however, it is the NRENs that must determine how they and CLARA can meet the needs of their users—scientists, academics, researchers, engineers, students, and others. It is the NRENs' responsibility to take advantage of their connections to the CLARA Network, rather than passively wait for changes to occur.

One final, persisting question is: “What will happen to the CLARA Network after March 2008?” Without further funding from the European Commission or other donors, CLARA will only be able to maintain its links to Europe and to the United States, which alone will be insufficient to meet regional needs. Therefore, at the ALICE-CLARA meeting in Bogotá, Colombia in June 2007, the ALICE partners stressed the need for continued funding from the European Commission as of April 2008, since any funding gap during 2008 would seriously threaten the global connectivity that the CLARA Network provides the NRENs in most of the connected countries. In the absence of funding, the situation for these groups would return roughly to what it was in 2003, when there was no advanced regionally organised network. The European Commission has already expressed its interest and willingness to support this successful example of international cooperation, which was cited by Commissioner Vivianne Reding as a significant demonstration of European-Latin American cooperation. Notwithstanding the good will expressed, the support and commitment of Latin American governments will continue to be crucial in sustaining and extending these efforts 🌐

Goal 13 Creative and content industries

Coordinator: Pilar Montarce,
representing Argentina

Participating countries

ARG, BOL, BRA, COL, CHL,
ECU, MEX, PER, DOM and URY.



“Toward a regional observatory for the creative industries”

The eLAC working group on creative and content industries split up into subgroups to address the activities included in Goal 13. These



included researching the development and challenges of the creative and content industries, examining questions such as the distribution of cultural and communications goods and services in the region, financing an economy of intangible goods, and ways of enhancing local capacity to produce content that respects diversity and cultural identity. These subgroups focused on two principal subjects. The first was a proposal for an observatory for these industries; the second concerned efforts to collect information regarding the financing of activities associated with these industries.

The first subgroup hired a consultant to conduct a study on the subject.² This was made possible as a result of financial support from the European Commission's @LIS project, provided through ECLAC. The study concludes, among other points, that, in the current environment, creativity is an essential economic element in a group of industries that are increasingly important in information societies. They generate high value added, and it is difficult to separate their economic value from their cultural value. The creative industries are built on the foundation of the new creative economy in which knowledge, creativity and intellectual capital are primary productive resources. The creation, production and marketing of intangible content and of goods and services, in which texts, symbols and images are central, is a characteristic of the creative industries, and makes them a dynamic component of knowledge-based economies. Among the most important creative industries are publishing, film, TV, musical creation, independent musical production, the record industry, content for cellular phones and websites, advertising, radio, publicity, architecture, art and antiquities, crafts, design, fashion, recreational software, and computer-related publishing and games.

Some of the features of the creative and digital content industries that emerge with the information society can be described as follows. Knowledge is an essential factor. Immediacy contributes to generating competition and new services in all sectors. Though, until recently, information was exclusively in analog form, digitisation now involves a transformation of physical media and the introduction of new schemes. Complete integration of data, text, image and sound may be achieved as a result of online networking. The advent of digital networks leads to disintermediation, since audiences can produce their own digital content and artists no longer require producers. Convergence of voice, data and images in the same medium brings new challenges. Innovation also plays a key role because of the need to update products, systems and processes, and imagination becomes the principal source of value. Finally, there is the important new role played by users themselves, not only due to the strong trend toward individualisation, resulting from the possibility of personalising content, but because of the social inclusion involved in generating content by using the tools of the so-called Web 2.0—including the production of content on platforms such as YouTube and Facebook.

The challenge of developing a foundation for a Latin American Observatory for the Content Industries (Observatorio Latinoamericano de las Industrias de Contenido, or OLIC) requires a clear focus on Latin American realities and on the region's cultural (analog-based) industries, as well as on the content industry that is beginning to emerge with the convergence of digital media. It also entails understanding the realities of each country, and its strategies and plans to develop content industries in a way that fosters job creation, provides professional training, and enhances social inclusion. For example, Argentina and Brazil export television products—teledramas, miscellaneous series and comedy programmes. Colombia and Mexico also export numerous teledramas. Venezuela has begun to follow suit, though its activity in this area does not yet account for significant sales. In Chile, public television plays an important role. Argentina and Mexico have strong publishing industries, with a potential market of 450 million Spanish speakers in 21 countries.

In regard to the consumption side of the publishing industry, it should be pointed out that reading rates in Latin America and the Caribbean are cause for concern. While an average person in Spain reads 14 books per year (according to 2003 data), the rate in the countries studied here—even in Argentina, Colombia and Mexico, which have the region's largest publishing industries—is no more than two books per year. In Brazil, the publishing industry's principal client is the government, with educational books also playing a significant role.

In terms of the record industry, the increase in illegal sales, home production and downloads, as well as the opportunity to disseminate music online—particularly significant among young people—is radically changing the relationships between singers, musical groups and the record industry itself. In Brazil, for example, there has been a substantial downturn in CD purchases, with indices for 2006 showing a decline of as much as 70%. Games for different digital platforms are an important part of the content industry, given the scope of the business involved in this sector. This market is child- and youth-oriented, with substantial value added: one or more characters in a given game could potentially lead to a film, graphic novel, drawings, TV or internet series. Alternatively, one of these forms could spawn a computer game. AM and FM radio are within the reach of virtually all of the region's inhabitants, and the firms that own TV assets are also generally AM- and FM-radio owners. In many countries, radio is considered the most important communications medium, and even where national radio stations do not exist, local stations are active nationwide.

² "Observatorio Latinoamericano de Industrias de Contenido", unpublished, Cosette Espíndola de Castro, ECLAC.



The subgroup on financing conducted a survey through the virtual dialogue platform at <http://www.eLAC2007.info>. There were a total of 119 responses from different countries, with 61% of the responses coming from Argentina, Brazil, Chile and Colombia. The results indicated an extremely high percentage of private financing in these industries (58% of the responses) through private capital, marketing of advertising space, and sponsorship by domestic or transnational firms. The survey also inquired as to the main problems facing these industries in each country. Responses clearly highlight economic and financial challenges. Despite the low cost of digital technology, 51% of the responses refer to lack of financing, low returns and high production costs. In regard to the question of which sectors receive the bulk of the financing, responses fall into three main groups: audiovisual and image industries (representing 49% of responses); publishing (21%); and the recording, radio, musical creation and independent musical production industries (18%). A mere 9% of responses point to online and cell phone content. These percentages are consistent, in the leading countries, with the billing statistics for the industries concerned. As to the most appropriate mechanisms to promote growth of the creative industries, 30% believe that this should occur by fostering special projects that promote local identity and/or facilitate independent production; 28% argue for contributions based on artistic and productive excellence; and 17% believe that ministries of culture or other government organisations should be responsible for incentivising the industry. Finally, the survey reflects negative perceptions of the State's role in promoting development of the creative industries, with 64% of respondents finding these efforts "insufficient" or "totally insufficient" 🌐

Goal 14 Governance

Coordinator: Olga Cavalli,
representing Argentina

Participating countries

ARG, BRA, ECU, PER, and DOM



"It is cause for concern that the voice of Latin America and the Caribbean is heard less and less in this worldwide discussion."

During the Second eLAC2007 Implementation Meeting, held in April 2006 in Lisbon, Portugal, Argentina presented a proposal for the creation of an eLAC2007 working group for Goal 14, which addresses the issue of Internet governance. The WG came into being following the Third eLAC Implementation Meeting in Santiago, Chile in November of 2006.

The objective of this working group is to promote sharing of information, dialogue, and cooperation among the region's countries

on issues relating to Internet governance. Although the concept is still being defined, the WG construed it as involving the various technical and organisational elements and rules by which the Internet (as we currently know it) functions, making it a tool for communication, information exchange and access to digital content from various types of devices, via different telecommunication network types, in almost any part of the world where the relevant communications infrastructure is available. Factors such as training in the management of Internet resources (IP addresses and domain names), costs of international connection, cybersecurity, spam, and related institutional and technological factors are also subjects of study.

The need for a regional group is highlighted by LAC's diminishing level of representation in global discussions on this topic. The table below shows the relative representation of different world regions in the United Nations Working Group on Internet Governance. This group was created following the 2003 World Summit on the Information Society, in order to research and generate proposals for action. The group's report, which was presented in July 2005, focuses on four topics: IP addresses and domain names, security and privacy issues, property rights, and questions relating to national development. The proposal for Internet management policy included the creation of an Internet Governance Forum (IGF) with representatives of civil society, the private sector and government. Its objective is to discuss a broad range of related issues and make recommendations to the international community. The first meeting of the Internet Governance Forum was held in Athens in November 2006. Brazil hosted the second meeting in November 2007, providing an opportunity for the region to increase its participation in the various issues involved in this subject.

The countries participating in this eLAC2007 working group are Argentina (Coordinator), Peru, Brazil, Dominican Republic, Venezuela and Uruguay. The group draws on wide-ranging participation and includes members with important regional roles in Internet governance. Among them are representatives of ISOC (The Internet Society), LACNIC (Latin American and Caribbean Internet Address Registry) and Alfa Redi (an organisation specialising in information technology law). Some of the members also belong to the United Nations Secretary General's Advisory Group for the Internet Governance Forum.

The ubiquitous nature of the Internet is based on global coordination of the resources that are essential to its functioning, of which a major aspect is the data that definitively identify websites (DNS, or domain names service), and the numbers that designate IP addresses and identify the DNSs and other devices connected to the Internet. Over the last decade, each country has developed different



World and regional participation in meetings of the United Nations Internet Governance Group (2004 – 2006)

Date	Title	Total number of participants	LAC participants	LAC participation as a percentage of the total
September 20-21, 2004	Discussions on creation of the Internet Governance Group	185	30	16%
November 23-25, 2004	1st Meeting	104	9	9%
February 14-18, 2005	2nd Meeting	124	14	11%
April 18-20, 2005	3rd Meeting	no data available	no data available	no data available
June 15-17, 2005	4th Meeting	184	7	4%
October 30–November 2, 2006	First Internet Governance Forum	1193	38	3%

Source: OSILAC for monitoring of eLAC2007, with information from the Working Group on Internet Governance (WGIG) (official website at www.wgig.org) and the Internet Governance Forum (official website at www.intgovforum.org).

capacities in Internet use and in the use of technology in general. The differences relate to the educational level of citizens, the academic level of educational institutions, the presence of a business sector that is proactive in incorporating state-of-the-art technology, and the State's involvement via the creation of regulatory frameworks designed to encourage the development of local technological industries and the use of technology in productive processes. Based on this national development scenario, each country will have its own way of confronting changes in Internet governance and the associated risks. The issues currently being discussed include current regulations on Internet governance and ccTLDs, evaluation of interconnection costs and their impact on access, national interconnection points, and regional gTLDs (generic top-level domains), such as the “.info” in “<http://www.eLAC2007.info>.”

Given its late start and the dynamism of world activity in this field, the work of the WG will proceed under the leadership of the government of Argentina, in close collaboration with the Brazilian government, until the global IGF meeting, to be held in Rio de Janeiro, Brazil from November 12 to 15, 2007 .

Goal 15 e-Government

Coordinator: Fermín Pineda, representing Nicaragua

Participating countries
ARG, BRA, CHL, COL, CRI, ECU,
NIC, PER and DOM



“From an agenda of priorities to the interoperability white book”

The e-government goal, a component of the public transparency and efficiency chapter of eLAC2007, comprises various activities. These include strengthening channels for sharing information regarding e-

government services, such as the LAC e-Government Network (Red de gobierno electrónico de ALC, or RedGeALC); development of the regional cooperation required for transfer of technologies, platforms, applications and computer programs; and development of knowledge, skills and best practices. Goal 15.2 also calls for “creating a working group to develop a set of priorities for the establishment of interoperability standards in e-government services.” The results of the WG’s two years of work surpassed initial expectations, and it has now reached the stage of working on a draft of the white book for e-government intranets and interoperability.

As a result of a joint working platform involving RedGeALC and collaboration with the Organization of American States (OAS), the Inter-American Development Bank (IDB), the Institute for Connectivity in the Americas (Instituto de Conectividad de las Américas, or ICA) and ECLAC, workshops on interoperability and government intranets were held in Bogotá, Colombia in November 2006 and in San José, Costa Rica in May 2007. Two videoconferences also took place (March 14 and April 4, 2006) to discuss challenges and progress regarding e-government.

The face-to-face workshops sought to consolidate the White Book of Interoperability, drawing on close cooperation between various countries—particularly Colombia and Brazil. The roadmap presented in this white book begins with definitions and concepts, agreed by all participants, regarding the interoperability architecture required. The definitions and concepts are based on research conducted by ECLAC with support from the European Commission’s @LIS programme, and with invaluable collaboration from the governments of Brazil and Colombia.

Modern, integrated, efficient government requires integrated and interoperable systems that in turn facilitate integrated, secure and consistent working processes throughout the public sector. Interoperable technology, processes, information and data are vital to providing quality services in this context, and constitute an essential foundation for e-government. They therefore serve as a point of reference for governments throughout the world. Interoperability makes it possible to rationalise



the use of ICT resources by sharing, reusing and exchanging technological resources—a prerequisite to providing an integrated, single-window resource for government, whereby citizens can carry out any official procedure in the virtual domain, regardless of what government agency is involved.

Interoperability consists of more than merely integrating systems and networks or exchanging data between systems, and extends beyond the task of defining the technology. Clearly, there must be a coherent set of systems consisting of installed hardware and software platforms, to integrate the various components and products of different providers. In addition, consideration must be given to any factor that affects the overall coordination of the system. Standards, policies and regulations must be addressed to meet these objectives. Studies conducted in the context of this working group pointed to four fundamental dimensions of e-government strategy involved in creating interoperable systems.

The first is the organisational dimension, involving the development of business models to address business objectives, facilitating collaboration between entities needing to share information, regardless of their individual internal structures and processes. In addition, organisational interoperability seeks to take into account the needs of the user community, making the most important services easily available and identifiable to users, while ensuring that the process is user friendly.

The second dimension is the semantic one. This requires that the meaning of information being shared is accurately understood by applications—other than the originating one—that may participate in a transaction. Systems must be given the capacity to combine information from other sources and to process it in an integrated fashion, while preserving the original meaning of the information.

Third is the technical dimension, involving areas such as hardware, software and telecommunications equipment and processes required to interconnect agencies and IT systems. Key factors in this regard include open interfaces, interconnection services, data integration, middleware, data presentation and exchange, accessibility and security services.

Last, but not least, is governance. This includes agreements between governments and other stakeholders involved in the discussion of interoperability and how to achieve it. Addressing governance includes creating opportunities for dialogue as a means of reaching agreement on various issues. The purpose of governance is to provide public entities the institutional frameworks needed to establish interoperability standards and ensure their adoption, while supplying government agencies the organisational and technical capacities needed for implementation.

The most recent meeting of the WG was held on September 10 and 11 in Santiago, Chile. The organisations supporting the work on RedGeALC (namely, the OAS, IDB, ICA-IDRC and ECLAC) suggested that the discussion centre on government intranets and regional interoperability, as well as on the White Book of Transnational Interoperability. The relevant ministries of the governments of Brazil and Colombia shared their experiences and thoughts regarding phase one of the transnational interoperability process—designed in collaboration with ECLAC—and on the launching of phases two and three of the Transnational Interoperability in e-Government project, to be carried out in the context of the Brazilian and Colombian foreign trade systems.

The LAC issues being explored by this working group are in the vanguard of the global governmental agenda. The European Union countries, as well as those of Latin America and the Caribbean, are in the process of learning to create integrated and internationally coordinated public service platforms. It is the view of this eLAC2007 WG that this process involves a multi-year (or perhaps multi-decade) commitment, and that a new realm of future work presents itself. However, this remains the sole means of ensuring that the region's citizens eventually receive transparent and efficient public services. The WG is highly appreciative of the valuable interagency collaboration, created around RedGeALC, with the OAS, IDB, ICA-IDRC and ECLAC 

Goal 23 Financing

Coordinator: Adrián Carballo,
representing Argentina

Participating countries
ARG, COL, SLV, NIC, PAN,
PGY, PER, DOM and URY.



“Financing the information societies is a public-private challenge, and begins with optimising the use of available financial instruments”

The objectives of the financing working group include assessing national and regional financing needs for ICT development, as a prelude to suggesting initiatives to optimise the use of financial resources and instruments. As a first step, the WG conducted a broad survey on financing needs for ICT projects in the region. The exercise was more successful than expected. It involved 358 experts, representing most of the region's countries. The survey was designed to examine how best to utilize financial resources and instruments, identifying regional priorities on digital development issues. The survey served as the starting point for a report on financing instruments available for regional ICT projects.



The number one financing priority for the information society, according to the survey, involves primary and secondary education. One-third of respondents placed priority on equipment, connectivity and content development at educational institutions. Interestingly, one-quarter of the experts emphasized the importance of developing networks that allow educational institutions to share information, stressing the potential of digital networks in facilitating coordination and collaboration. 27% of responses gave priority to the need for financing distance-education projects (14%+13%)—considered by respondents to hold major potential. The creation, maintenance and improvement of infrastructure, and the creation of capacities, were identified, respectively, as subsets of these two priority areas.

The working group has also begun research into the public-private dynamic, with a view to strengthening financing for the information societies. The group is attempting to collect information on experiences with public instruments designed to support ICT projects, and expects to make policy recommendations oriented toward enhancing financing in this area.

As a result of the sector's privatisation and deregulation through foreign direct investment, the private sector has played a key role in telecommunications development in LAC since the 1990s. Investment at that time was principally aimed at acquiring assets, expanding operations and paying for operating licenses. This led to rapid expansion of communications infrastructure during that decade. The composition of foreign investment flows in telecommunications worldwide has changed over the last two decades. During the first half of the 1990s, it was geared toward financing privatisation of State operators; later, it was channelled to the acquisition of new operating licenses, especially for mobile telephony. Foreign direct investment is sensitive to the general business climate (favourable/unfavourable) in the target country.

Even with a telecommunications sector that is competitive and open to private investment, the public sector plays an important role in narrowing the digital divide. This is due, among other things, to the low commercial profitability of certain services. By 2000, in the Declaration of Florianopolis—the region's first regional declaration on the subject—the countries already recognized that “allowing the evolution of the information and knowledge society to be driven solely by market mechanisms entails a risk that social gaps within our societies will be increased, creating new forms of exclusion, aggravating the negative aspects of globalisation, and increasing the gap between the developing and developed countries.” Public intervention is justified when projects are socially profitable and, in particular, when a service is available only to part of the population, while those without access suffer economic or social consequences.

When public funds are used to extend the reach of information and communications services, the focus should be on the eventual development of sustainable markets in the private sector. The concept is to turn socially beneficial projects—one not profitable in business terms—into commercially viable undertakings, by stimulating supply and/or demand for the service. The key question here is how far the market can go, given that some locations are simply beyond its reach. In this regard, the recent study by REGULATEL, the World Bank and ECLAC suggests differentiating the ICT access divide from the market divide.³

Goal 25 Legislative framework

Coordina: Erick Iriarte,
representing Perú

Participating countries

ARG, COL, CHI, SLV, MEX, PER, and DOM.



“The problem of a legislative framework for digital activity is one of coordination and execution, more than one of legislation”

The initial aim of the working group on legislative frameworks was to “promote and foster policies to harmonize regulations and standards, in order to facilitate legislative frameworks that create trust and security, both nationally and regionally, by providing a framework for the development of the information society, giving special attention to legislation that protects privacy and personal data, as well as addressing the issues of cybercrime and ICT crime, spam, electronic and digital signatures, and electronic contracts.” The very way in which this mandate is formulated reveals the disparity of approaches confronting this WG. After internal discussions, the group chose to give priority to the issues of data protection and ICT crime, and proceeded to analyse the current situation regarding these issues. It supervised a study on the subject, made possible as a result of financial support from the European Commission's @LIS project, through ECLAC.⁴

In the last few years, various Latin American institutions have been working to develop national data protection legislation. These include the Asia-Pacific Economic Cooperation Forum on Data Protection, the

³ “Nuevos Modelos para el acceso universal de los servicios de telecomunicaciones en América Latina: lecciones del pasado y recomendaciones para una nueva generación de programas de acceso universal para el siglo XXI”, http://www.regulatel.org/temp_estudio_su/Informe_completo.pdf.

⁴ “Documento de discusión sobre marco legislativo en la sociedad de la información en América Latina: un enfoque en literatura existente, delitos informáticos, delitos por medios electrónicos y protección de datos”, unpublished, Erick Iriarte, ECLAC.



Ibero-Americana Data Protection Network, supported by the European Community, and the LAC Information Privacy and Access Monitor, supported by the UNESCO Information for All programme.

In civil society, IJusticia, with support from the IDRC, has been working on the so-called Rules of Inheritance; the Carter Centre has supported information access initiatives (the other side of the data protection coin); and the Andean Commission of Jurists, with support from international organisations and cooperation, as well as from civil society, has been developing activities and proposals for local data protection legislation, along with working, during the last several years, on principles to govern regulatory harmonisation in this area. These groups were working on eLAC2007 Goal 25 even before the working group or the OAS Declaration of Santo Domingo existed.

Despite academic discussion, however, over whether to follow the European legislative model for data protection (based on the European Union Directive on Data Protection) or the United States privacy model (which emphasizes inter-party agreements on how data is to be handled), the countries have been working on general principles—either at the networking level or driven by local concerns. As they advance in their individual development processes, the countries of the region have created data protection tools. For issues as complex as the interoperability of government networks (a question being addressed by the eLAC2007 Goal 15 e-Government WG), adequate data protection legislation is indispensable. In the absence of such, however, constitutional provisions regarding the right to privacy (a right enshrined in one form or another in all of the region's constitutions) are applicable. Thus, it is not so much a single law or legislative model that is needed, as a harmonised framework for the various national laws, in order to facilitate regional and cross-border development within an international framework.

Legal principles, therefore, need to be reinvented, with the principles on which countries have been operating used as guidelines. However, since there are nearly as many models as there are countries, it is inevitable that each nation will emphasize its own needs, thus creating problems in coordination. Entities participating in information access networks are different from those involved in data protection or cybersecurity, while these in turn differ from those coordinating digital agendas and national information society strategies for the countries—a situation in which the WG has proved to be an important asset. It has facilitated dialogue between the Ibero-American Data Protection Network, the eLAC2007 Goal 25 WG, and the Information Privacy and Access Monitor. This interchange creates opportunities for synergy and reduces overlapping efforts, an important factor in achieving regulatory harmonisation. One of points being discussed in this international dialogue is the fact that

the region's countries are negotiating international treaties on trade, an area in which international data transmission is crucial. One of the most valuable lessons that this working group has taken from the discussion is the importance of collaborating with existing agencies already working on the issues, so as to avoid wasting energy and resources, thus facilitating effective progress toward a harmonised legal framework. In order to deal successfully with the challenge, a decision to move forward in unison is not so much an option as a necessity.

What would otherwise be a simple action entails major policy implications, since uniform or unified laws cannot be achieved without first accepting the diversity of legislation, which is not specifically designed for the purpose at hand. Specific legislation must be formulated based on general principles shared by the various entities involved in developing data protection legislation, with their differing points of view. What is important is to join efforts, rather than compete to impose different solutions. A similar phenomenon, though of a different intensity, is evident in various areas related to regulation in the information society. This is due primarily to the fact that information society regulation reflects prior, existing regulations. New regulations must supplement law already in place, though the specifics of how to do so in a way that adequately addresses the social implications are, as yet, unclear. Thus, regional work on these issues must not degenerate into a competition to impose a viewpoint, but rather must take the form of genuine, effective coordination.

A second possible solution to the problem of regulatory harmonisation involves the issue of cybercrime and ICT crime. In terms of regulation, criminal legislation has a strong claim to primacy. In reality, this concerns crimes that fall under existing legislative provisions, though, with digital technologies, they have assumed a new form. There are very few crimes that do not fall within existing definitions of crime. Thus, the legal asset to be protected here is information itself, and this working group decided to differentiate cybercrime and ICT crime, since crimes such as pornography, for example, are already defined, and the electronic element is simply a new medium through which they occur. To cite another example, phishing is itself a variety of fraud or theft, while computer sabotage represents a type of damage inflicted on assets.

In Latin America, the problem is perhaps not one of criminal regulation, as such, but rather one of creating instruments to prosecute them, such as, for instance, rules regarding forensic experts. More important than regulation, however, is the training of the relevant legal actors to share a perspective and philosophy in which digital phenomena are understood in their proper context, not as a parallel reality of their own. Thus, the efforts of groups such as the OAS Group of Experts on Cybercrime (the CERTs group), the COLADIS conferences, and the Cybercrime Task Force,



quartered at INTERPOL's regional office, have focused on cybersecurity, creating awareness and developing proposals. This has led not only to the training of CERTs, but also to the signing of the Budapest Convention on Cybercrime.

The training of forensic experts requires guiding principles, enshrined in national legislation, to provide mechanisms for developing effective mechanisms for combating cybercrime and ICT crime. The Convention on Cybercrime is an attempt to create a cross-border mechanism, given that it is at national borders that criminal law encounters its greatest obstacles. If an act is a crime in country A, but not in country B, where the crime originates, extradition is impossible. Beyond a mechanism to ensure equivalent laws, there must be a mechanism for cooperation to prosecute crimes that may have different names or be addressed differently by different countries. The Convention on Cybercrime has been signed by the European Union, Canada, Japan, South Africa and the United States. It thus constitutes a framework for harmonization, along with containing general guidelines for adapting existing legislation and for developing legislation in areas where such does not yet exist. This approach is different from the notion of harmonising existing law, since it seeks to adapt legislation to models promoted by organisations such as the OAS—models that our region has been urged to endorse.

In short, addressing the problem of legislative harmonisation must involve the formulation of solutions that respect efforts being made by the countries, rather than solutions that fall outside the frameworks of regional and international accords and dialogue. What is lacking at present is a coordination of efforts on the part of the various countries. Accomplishing this requires dialogue with all those involved, giving special weight to the importance of regulatory harmonization 🌐

Goal 1 Infrastructure

Coordinator: Roque Gagliano,
representing Uruguay

Participants

Raúl Echeberría (LACNIC), José Pablo Jaramillo (Intemexa), Christian O'Flaherty (Global Crossing LA), Gabriel Adonaylo (Comsat Int.), Antonio Lagioia (Telefonica Wholesales), Jorge Torres (Comtelca HN), Bevil Wooding (Congress WBN) and Oscar Robles (NIC MX)



“Root server mirrors are considered the most critical resource for any country to install”

At the eLAC2007 Third Implementation Meeting in Santiago, Chile, in November 2006, there was concern regarding the work associated with Goal 1, which involves developing regional information technology infrastructure. In the multisectoral spirit that eLAC2007 is intended to promote, the Uruguayan government brought together a group of experts on the sector to gather information and develop proposals in this important area. The objectives of the eLAC2007 Plan of Action's Goal 1, which addresses the issue of regional infrastructure, include developing Internet traffic exchange points (IXPs or NAPs) and root server mirrors (anycast servers).

Routing of Internet traffic is managed by exchanging IP addresses, or prefixes. This can be accomplished by a variety of methods, including the so-called transit method and peering. Under the transit concept, provider A offers transit to provider B, committing itself to carrying information from, and to, B as a general matter. In such cases, B must usually pay for the service provided by A. If A and B have a peering relationship, they only commit to exchanging traffic originating from, or destined to, their own clients. Not all providers are willing to make peering agreements, but if they do so, no cost is generally involved, since the benefits are of similar magnitude for both parties. The practice is common in cases where the volumes of the two sets of traffic exchanged are comparable, or where one or both of the parties are motivated by a special interest, as may occur with the exchange of traffic between different regions in which neither of the parties has traffic.

The traffic exchange points (IXPs), or network access points (NAPs) are meeting points for different access and/or content providers. Their purpose is to facilitate peering agreements. In most LAC countries, NAPs are quite important, since they help local traffic to remain local. NAPs have also been determining factors in hosting critical services such as anycast servers. There are two types of NAPs in the region: commercial and non-profit. Depending on national regulations and economic dynamics, one or another of these forms of NAPs flourishes. There are a total of 21 traffic exchange points in the region, spread among 12 countries, with nine in Brazil, two in Ecuador and one each in Argentina, Colombia, Costa Rica, Cuba, Nicaragua, Panama, Paraguay, Peru and the Dominican Republic.

Among regional initiatives to encourage the creation of NAPs, LACNIC (the address registry for LAC) occupies a leadership role. Since 2004, along with its annual meeting, this organisation has held a multilateral “Regional Interconnection Forum,” or NAPLA. The forum, which is the fortuitous creation of a number of NAPs in the region, is currently in its seventh year. LACNIC also offers the community an open newlist at napla@lacnic.net. The list is a tool for communication among different participants, including operators, NAPs, researchers, and the



Location of original root servers

Server	Organisation	City, Country
A	VeriSign Naming and Directory Service	Dulles VA, USA
B	Information Sciences Institute	Marina Del Rey CA, USA
C	Cogent Communications	Herndon VA, USA
D	University of Maryland	College Park MD, USA
E	NASA Ames Research Centre	Mountain View CA, USA
F	Internet Systems Consortium, Inc.	Palo Alto CA, USA
G	U.S. DOD Network Information Centre	Columbus OH, USA
H	U.S. Army Research Lab	Aberdeen MD, USA
I	Autonomica/NORDUnet	Stockholm, Sweden
J	VeriSign, Inc.	Washington DC, USA
K	RIPE NCC	Amsterdam, Netherlands
L	ICANN	Marina del Rey CA, USA
M	WIDE Project	Tokyo, Japan



Source: Work Group compilation.

general public. The subjects addressed include interconnection, peering, and related issues. In July 2007, LACNIC, Cisco and the Salvadoran government, with support from the Internet Society (ISOC), the Packet Clearing House (PCH) and ICANN, held a seminar in San Salvador, El Salvador, on traffic exchange points, in order to encourage the creation of NAPs, based on regional and international experiences. The event was well attended by representatives of various LAC countries.

The infrastructure of the domain name system (DNS) consists of a massive database distributed around the globe, which, among other things, makes it possible to translate a domain name (e.g., www.ECLAC.org/SocInfo/eLAC) into an IP address. This allows Internet users to send email and move about the Internet more easily. The database is organised as a hierarchical tree structure, with the servers at the end of the structure called root servers. Due to constraints of the architecture of DNS infrastructure, there can be no more than 13 root servers, and their location has been determined by historical developments. None of these is in the LAC region. The table below shows the location of the 13 original servers, 10 of which are in the United States, 2 in Europe and 1 in Asia.

Since 2002, those administering root servers have begun to install mirror copies of them, which function identically to the 13 original servers. Having a mirror copy of a root server allows the users in the country where it is located to resolve issues at the country's root server, and not suffer loss of continuous service in the case of international connectivity problems. It also permits more efficient use of Internet services. The installation of these mirrors, is considered the most important critical resource for any country to have. However, their effectiveness depends strongly on the local interconnections. Therefore, anycast servers are generally placed at traffic exchange points (NAPs).

LACNIC's +RAICES programme has encouraged the hosting of anycast servers in the region, as a result of which five copies of root server F have been located here. In addition, four other anycast servers have been installed by other programmes. Programmes such as +RAICES must be encouraged in the region, particularly in regard to root servers other than F—the one used most in the region, as shown in the figure below—in order to bring the number of anycast servers in the region to ten: 7 for server F and 3 for J.

Since 2005, when eLAC2007 was approved, progress on Goal 1 has been achieved. As explained above, the number of NAPs in the region has increased, while the number of mirror copies of root servers in the different countries has also increased. At the same time, ongoing discussion fora have been created. However, this still falls short of what is needed. It is essential that this goal continue to be a priority in the region's future plans of action. The creation of this working group is merely the beginning of the process—providing a venue for proposing concrete goals and the tools to attain them. Collaboration with existing regional agencies working on this issue is the most effective means of strengthening work in this area .



Monitoring of eLAC2007 points to progress and major challenges

The monitoring and follow-up process is a key aspect of policy execution, since it makes it possible to assess both impact and the implementation process. With this in mind, the region's governments requested that the ECLAC Secretariat "maintain and develop indicators that facilitate ongoing evaluation and dissemination of the region's progress in regard, particularly, to the eLAC2007 goals" (ECLAC Resolution XXXI). They also specified that monitoring of the Plan of Action was to be conducted as a part of implementation (eLAC2007 Goal 27). Cognizant of the constraints and problems associated with such a delicate task, ECLAC's Observatory for the Information Society in Latin America and the Caribbean (OSILAC) has undertaken the challenge of monitoring eLAC2007. The results are summarised in this document, which includes 100 charts and 42 tables, and outlines the region's situation in critical areas for the development of its information societies, with a view to defining the pending digital challenges.

As a general matter, the monitoring reveals major progress in the region in development of information societies. 15 of the 27 areas of action monitored indicate progress or strong progress, while 12 show moderate or insignificant progress. The table summarises progress in each of the areas monitored. It is important to note that these areas are comprised of specific activities, and that, as would be expected, progress is not uniform across countries and activities. For example, area 15 of eLAC2007—"e-Government"—includes eight individual activities. The finding of progress in a given area does not imply that the 33 LAC countries have achieved uniform progress in all of the activities in the given area, but rather, reflects a perception resulting from the monitoring process. That view is based on distinguishing the presence of greater or lesser efforts in the region with respect to a broader range of endeavours. There may be progress in addressing specific aspects related to particular challenges or cases, which may not be reflected in the table's general classification of findings.

Approaching the findings in greater detail, it should be noted that the various areas covered in eLAC2007 include 70 activities, of which 63 are action-oriented, while 7 are designed in terms of quantifiable results. Among the activities that are relatively easy to measure are those oriented to quantifiable results, although monitoring these successfully depends on the existence of data or indicators, and on funds to create indicators and collect data. Action-oriented activities are, of course, more difficult to measure than activities designed with quantifiable measurements in mind.

Degree of progress in eLAC2007 areas on general regional development

Area	Goal	Degree of progress
A. Digital access and inclusion	1 Regional infrastructure	Progress
	2 Community centres	Strong progress
	3 Online schools and libraries	Progress
	4 Online health facilities	No progress
	5 Work	Moderate progress
	6 Local government	Strong progress
	7 Alternative technologies	Moderate progress
B. Creation of capacities and knowledge	8 Software	Moderate progress
	9 Training	Progress
	10 Research and education networks	Strong progress
	11 Science and technology	No progress
	12 Businesses	Progress
	13 Creative and content industries	Progress
	14 Internet governance	Progress
C. Public transparency and efficiency	15 e-Government	Progress
	16 e-Education	Strong progress
	17 e-Health	No progress
	18 Disasters	No progress
	19 e-Justice	Moderate progress
	20 Environmental protection	Moderate progress
	21 Public information and cultural patrimony	Progress
D. Policy instruments	22 National strategies	Progress
	23 Financing	No progress
	24 Universal access policies	No progress
	25 Legislative framework	No progress
	26 Indicators and measurement	Strong progress
E. Enabling environment	27 Follow-up on the World Summit and on execution of eLAC 2007	Strong progress

Note: The evaluations present a general impression of the advancement of the region as a whole in each of the thematic areas. It is important to clarify that the region's advancement not necessarily is in agreement with the progress and level of activity of the eLAC2007 Working Groups. For example, as can be appreciated in the reports of the Working Groups on Financing (23) and Legislative Frameworks (25), these groups have been very active. However, the progress of the entire region is subject to inertias outside of the circle of influence of these Working Groups, especially in the short-term perspective of only three years.

One of the quantifiable activities is eLAC2007 Goal 2.1, aimed at reducing national averages to 20,000 potential users per public ICT access centre (regardless of whether access centres are state owned or private in nature). As the table shows, the great majority of the countries had already achieved this goal by 2005, or even significantly exceeded it. Cases in point are Argentina, Peru, Ecuador, Mexico and Costa Rica, with fewer than 2,300 users per public ICT access centre, a figure well below the regional average. Paraguay and Nicaragua still have mayor opportunities

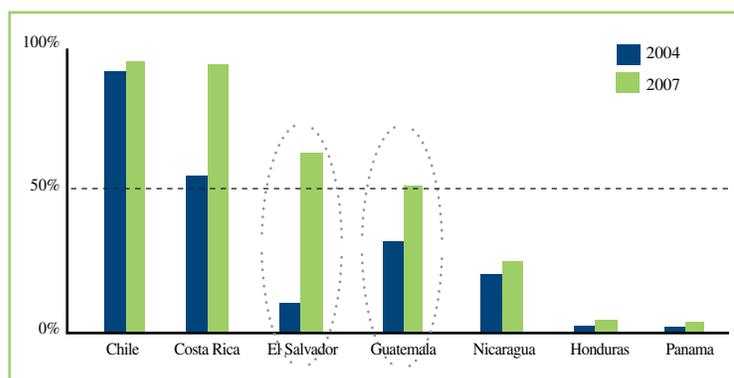
for citizens to benefit from community access. This example highlights the lack of knowledge of the realities of the region, with which the plan goals were formulated. At the same time, monitoring of eLAC2007 indicates that a learning process has begun in the measurement and monitoring of ICT policy in the region, raising the policy discussion to a new level of seriousness and maturity.

Average potential users per public ICT access centre (2005)

Country	Users per public access centre
Paraguay	104 208
Nicaragua	52 964
Uruguay	18 743
Bolivia	8 353
El Salvador	8 284
Brazil ⁽²⁾	8 143
Colombia	5 742
Chile	3 454
Guatemala ⁽²⁾	2 423
Costa Rica	2 238
Mexico	1 300
Ecuador	1 085
Peru	1 017
Argentina	889
Lat. Amer. Average	2 345

Source: Maeso and Hilbert, ECLAC in cooperation with the Chasquinet Foundation, "Centros de acceso público a las tecnologías de información y comunicación en América Latina: características y desafíos," (online at <http://www.ECLAC.org/Socinfo>). (2) Data, March 2007.

Availability of email in municipal governments in selected countries (April 2007)



Source: OSILAC, with online information available from the countries

Note: Number of municipalities: Costa Rica: 81; El Salvador: 262; Guatemala: 331; Honduras: 297; Nicaragua: 153; Panama: 75.

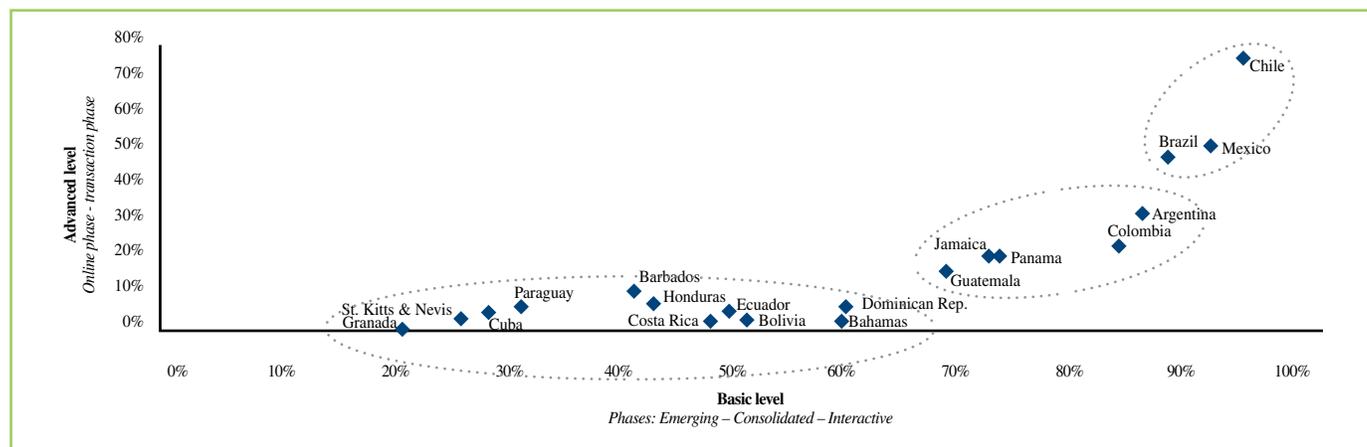
Goal 6.1, whose objective is to connect at least half of urban local governments and one third of rural local governments to the Internet, represents a successful case of policy design and monitoring. Sustained efforts by OSILAC (more than three years of activity) have helped in identifying best practices. The chart below shows major efforts undertaken in El Salvador and Guatemala toward achieving this goal during the three years of eLAC2007 implementation. Both countries surpassed the targeted 50% level. The fact that some of the region's countries have progressed more than have others at a similar stage of development underlines the fact that progress is possible in developing countries, and that practical solutions that take into account the realities of the region can indeed be found. For instance, Costa Rica and Panama are at comparable levels of development in terms of per capita income and other measures; however, a search conducted as part of the eLAC2007 monitoring process indicates that the email addresses of local authorities in Costa Rica are more accessible than are the corresponding emails in Panama. When quantitative monitoring is conducted, the diversity between countries can serve as a catalysing element for development, by identifying best practices, facilitating the sharing of knowledge, and increasing cooperation between countries.

Progress toward Goal 15 (e-government) is another example of how opportunities for regional cooperation can result from unequal progress between countries. As the chart shows, there are varying degrees of sophistication in online public-sector presence in LAC. One group of countries shows a basic level, with their official websites basically offering information on their institutions, though in some cases, forms can be downloaded for use in procedures (to be completed offline, in the traditional manner), while agencies can be contacted by email. A second group of countries occupies an intermediate stage: approximately 20% of their sites are of an advanced nature, with networking in place and online transactions possible. In these cases, two-way communication is possible, and there are options for online processing of payments and for bidding on government contracts. In a third group of countries (Chile, Mexico and Brazil), over 85% of sites are at the basic level, and over 50% are at an advanced level. The successes and progress achieved in these countries can be a valuable asset in the sharing of experiences, as is already occurring through regional networks such as RedGEALC.

The objective of eLAC2007 Goal 16 is to "link national educational portals, in order to create a network of educational portals in LAC that facilitates sharing of experiences and content, in addition to promoting the adaptation, localisation and development of educational content for dissemination through this network." The last three years saw the creation of the Latin American Network of Educational Portals (Red Latinoamérica de Portales Educativos, or RELPE), which is conceived



Degree of sophistication of online public sector presence in LAC countries, according to phase of development of e-Government (2005) (Percentage of websites)



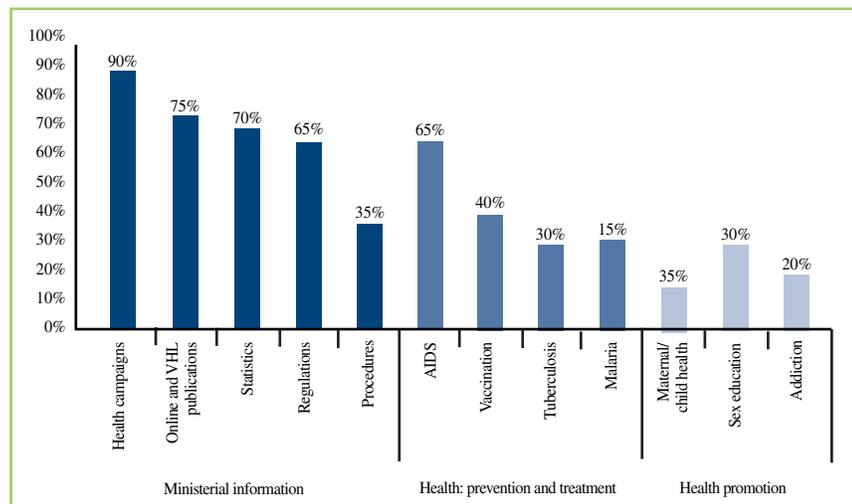
Source: OSILAC, with data from “Global e-government readiness report 2005, from e-government to e-inclusion,” Department of Economic and Social Affairs of the United Nations (online at <http://www.unpan.org/egovment5.asp>).

as a distributed regional system for storing and circulating educational material. Its nodes are the national educational portals designated by each country. With RELPE, each country develops its own portal based on its educational goals and national interests, independent of the technological platform to be used. Each portal’s content circulates freely throughout the network. Since the cost of developing digital content can be high, whereas the cost of reproducing it is nearly zero, enormous economies of scale can be achieved. Currently, 7 of RELPE’s 18 members are full partners, meaning that they have completed the protocol for indexing the network content mandated by the protocol, and have made the technical adaptations needed to connect to the network. Of the RELPE portals, 76% are strictly educational in nature, 12% are institutional sites that also

offer ministerial and administrative information, and the remaining 12% are ministry of education sites dedicated exclusively to disseminating institutional and sectoral information. The rapid development of the network demonstrates the vast potential of regional collaboration in exploiting economies of scale and facilitating shared learning within the region.

One example of an area where advances could not be observed is e-health—part of eLAC2007 Goal 17. The websites of the region’s health ministries are oriented more to disseminating institutional information, including information on health campaigns and links to governmental, and statistical and regulatory institutions in the health field, than to actual health care content. In 2006, 38% of LAC health ministries had no website. As shown in the chart below, 65% of the sites provide information on AIDS, 30% on tuberculosis and 15% on malaria. Only 35% report on maternal/child health issues. Considering that the three illnesses dominating Goal 6 in the Millennium Development Goals (MDGs) fall within this area, and that Goal 5 of the MDGs is exclusively dedicated to maternal health, this situation can hardly be justified. The progress shown by eLAC2007 monitoring in other electronic sectors, such as education and government, demonstrates that there are sectors within the information society that could be useful in guiding the health sector in seeking approaches and benefiting from lessons learned, thus enabling it to begin the major catch-up process required to bring it into the digital age. (Complete report at <http://www.ECLAC.org/SocInfo/OSILAC>)

Content of health ministry websites in LAC countries (December 2006) (Percentage of websites) (n=20)



Source: OSILAC, with information from the websites of the countries’ ministries of health.

@LIS: Lessons learned from four years of European-Latin American collaboration on the Information Society

The relationship between Latin America and Europe is based on historical and cultural ties sustained by cooperation, economic relations and political dialogue. The European Union's official contribution to the region's development represented 41% of all such aid received, making it the region's most important ally in carrying out development projects. One of the recent priority areas has been cooperative activity in the framework of the Alliance for the Information Society (@LIS), an initiative that emerged from the policy dialogue that began in Rio de Janeiro in 1999, which brought together the Heads of State of the European Union (EU) and of Latin America and the Caribbean (LAC). The Alliance was officially launched at the EU-LAC Ministerial Meeting on the Information Society in April 2002, in Seville.

@LIS had a total budget of 77.5 million euros, of which 63.5 million euros was funded by the European Commission. The programme included various actions on a variety of issues and projects, covering different domains, leading inevitably to varying degrees of progress among the different development-related areas. The programme sought, first, to encourage two types of dialogue: discussions dealing with policy and regulatory issues, led by ECLAC; and dialogue regarding regulatory issues, led by ETSI. Second, the programme sought to implement three networks: the Network of Latin American Regulators, for which REGULATEL was responsible; the interconnection of research and education networks carried out by the CLARA network; and the networks of other participants, executed by MENON, AHCINET, APISEL and VECAM. Third, @LIS cofinanced a total of 19 demonstration projects in four sectors: local electronic government, e-education and cultural diversity, public e-health and electronic social integration. (Given the limited space here, it would be impossible to present all of the outstanding activities and successes of @LIS. Further information can be obtained on the website, at <http://www.alis-online.org>.)

The principal objective of the policy and regulatory dialogue, led by ECLAC, was to encourage dialogue within Latin America and with Europe, while at the same time encouraging the development of information societies in Latin America. The dialogue was designed to facilitate the development of regional and national strategies and to expand knowledge on the subject in the region.

The dialogue was instrumental in helping the countries of the region create the eLAC2007 Regional Plan of Action, which was launched at the Regional Ministerial Conference in Rio de Janeiro in June of 2005,

and subsequently assessed at the Regional Ministerial Conference in El Salvador, February 2008.

In the context of the plan, academics and experts from both regions have produced more than 30 short publications, in addition to some 8 books soon to be published, in attempts to improve understanding of digital dynamics in the region.

Three consecutive regional plans emerging from the eEurope2002, eEurope2005, i2010 process and from the eLAC2007 process have provided significant synergies and opportunities for shared learning. At the World Summit on the Information Society, it was clear that both of these regions possess exceptionally detailed, specific strategic plans that are being implemented. Both initiatives are designed around a series of short-term plans that, in turn, are a part of long-range strategies. Both have an architecture based on national focal points, multi-stakeholder participation, and a monitoring structure to ensure that the plan is properly carried out. (For more information, see <http://www.ECLAC.org/SocInfo>.)

The objective of the Network of Latin American Regulators is to strengthen institutional collaboration among regulators in the different countries, and to share information and experiences, in order to improve independent regulation in Latin America's telecommunications sector. The REGULATEL forum includes, as active members, Latin America's 19 telecommunications regulatory bodies, along with observer-status members from Spain and Portugal. Other European organizational counterparts also frequently attend the meetings.

The forum focuses on sharing experiences of the members, strengthening the international presence of the Latin American countries, and promoting telecommunications progress in each country, as well as in the region as a whole. The dialogue between regulators also provides a chance to address, in a timely fashion, issues regarding the regulation of services, so as to keep pace with technological progress in the countries. REGULATEL maintains a complete calendar of conferences, training activities and research activities, in order to assist regulators, as networks in the region expand (<http://www.regulatel.org>).

One successful demonstration project in the @LIS context was the T@lemed project, which introduced an e-health model in healthcare



services for underserved regions of Brazil and Colombia. The model uses telehealth and diagnostic medical technologies. Clinical applications include treatment of diseases common in the region, such as malaria, and general ultrasound applications for pregnancy, urology and cardiovascular analysis. The telehealth networks are designed to facilitate communication between hospitals in large cities and isolated facilities in underserved regions.

Thousands of patients benefited from these services, with a consequent reduction in the real costs of providing services. The development of the T@lemed model is an illustration of how ICTs contribute to healthcare—one of the least advanced areas in which digital technology has been applied within Latin America's information societies (<http://www.alis-telemed.net/>).

In telemedicine, the Hispano-American Health Link (Enlace Hispano Americano de Salud, or EHAS) project demonstrated that the appropriate use of ICTs can contribute to improving the public primary healthcare system in the region's rural areas. The project includes deployment of a communications network in each of the countries involved—Peru (Cuzco), Colombia (Pacific coast) and Cuba (Guantánamo)—with a system comprised of 36 rural healthcare facilities (12 per country) employing a mixture of radio-transmitted voice and data communications in areas lacking telephone service. The installed infrastructure supports remote information services, response to questions, epidemiological observation, management of appointments, and access to medical information. The voice and data communications also facilitate teletraining for healthcare personnel, including doctors, nurses and technicians; automating of the epidemiological monitoring system; remote doctors' consultations; filing and cross-referencing of patient information; and improvement in systems for emergency evacuation and distribution of medications (<http://ehasalis.ehas.org/>).

The Link-all Pilot Project helped remote Latin American communities achieve sustainable development by facilitating the introduction and adoption of ICTs, concentrating on sectors such as crafts, eco- and agrotourism, and cultural patrimony—all of which are inter-connected and complementary in remote rural areas. The project's principal objective was to promote knowledge and innovation based on a B2B (business to business) IT platform, in order to promote a “sustainable-development-friendly environment” in the region, drawing on the very resources—natural, cultural and human—of the remote communities.

The platform offers collaboration with local communities on important issues, while providing information and assistance in conducting e-business, making it possible for them to market their products and services on the global market via satellite and radio communications technologies.

The project's underlying concept is to promote the electronic inclusion of these communities and their insertion in the global market. This is to be accomplished through a strategy of local and intersectoral development based on the natural, cultural and historical patrimony of the regions, aimed at increasing their capacity to develop sectoral, intersectoral and regional networks for mutual assistance (www.link-all.org).

As part of the final phase of implementation of the @LIS programme, the participants formulated a number of lessons learned and preliminary conclusions. The programme was designed to cover various aspects of developing information societies—matters of policy, technology, and social factors—and to contribute to the region's debate on policies and regulations, while at the same time assisting with concrete projects. This structure, involving horizontal actions and focused demonstration projects, though well conceived, would have benefited from greater emphasis on developing synergies, so as to enhance coordination between the different actors. @LIS has therefore emphasized the need for regional coordination, as exemplified by the activities of countries utilizing tools such as eLAC2007. The @LIS programme highlighted, from the start, policymakers' desire to participate in the proposed activities. Numerous initiatives and meetings were organised, and participation and interest were strong. The experience showed that, in contrast to other, more controversial, subjects on the development agenda, the issue of applying technology to development inspires little political controversy. In fact, the contrary is the case: opportunities for international sharing of experiences and cooperation in this area have been enthusiastically received by governments and others involved in the development process. Thus, the collective process of building the region's information societies has proved to be an excellent way to encourage and accelerate regional integration in Latin America and to strengthening effective cooperation with Europe.

Another major positive impact of @LIS is in emphasizing ICTs as a means, not an end, in responding to current societal problems—utilizing them as tools for greater inclusion of all segments of the population.

One lesson learned is that collaboration between Europe and Latin America in this area is a bi-directional process, with great potential for genuine dialogue and sharing of experiences. In the area of online presence of governments, for example, some Latin American countries, including Chile, Brazil, Colombia and Mexico, are more advanced and better positioned in international rankings than are many European countries. Moreover, the valuable experience of many Latin American countries concerning public access to ICTs is particularly germane to certain Eastern European countries. The new and dynamic nature of the subject makes dialogue in this area a valuable source of common learning, development and shared applications.



In Europe and Latin America, there has been considerable interest and effort in working to meet the @LIS goals, in both the public and private sectors. Participants reported investment in infrastructure, though this has not been at the pace anticipated, due to economic difficulties among the countries. The growing demand for collaborative research between the two regions has emerged as a common objective. Important factors to consider include the cyclical changes in government that produce changes or slowdowns in ongoing programmes, a phenomenon that complicates matters for those involved.

The @LIS programme is an expression of the European Union's strong desire to help coordinate development efforts in Latin America. The EU has been instrumental in creating networks of experts and policymakers in this emerging field, while promoting the process of sharing experiences and good practices between countries. There has been a consequent expansion in applied knowledge, with new analytical approaches and specific impacts in the area of ICTs. The dialogue on regulations and standards, and the Latin American and the Caribbean eLAC2007 Regional Plan of Action for the Information Society have played a particularly important role.

These remarks would be incomplete without referencing the issue of the future sustainability of the various initiatives sponsored by @LIS. Consideration should be given to mechanisms capable of enabling these ongoing initiatives and enhancing their impact.

The @LIS process has produced a diverse chain of consequences, providing an opportunity for sharing of lessons learned, not only between countries, but also at the inter-regional level. The next phase of regional cooperation between Europe and Latin America is currently in the process of being formulated. The Ministerial Conference on the Information Society in El Salvador in February 2008 will address a series of challenges that the region faces concerning digital development between now and 2010. The knowledge and experience provided by @LIS over the last few years provide a solid basis for facing these challenges. Within the region there is hope that efforts to meet the challenges will continue to enjoy the support and knowledge provided by this valuable dialogue with the members of the European Union 

Heads of State and Government highlight the importance of ICT and eLAC2007 for regional development

The Nineteenth Summit of Heads of State and Government of the Permanent Mechanism for Consultation and Political Coordination - Rio Group – took place at Turkeyen, Guyana on 2 and 3 March 2007.

Encouraged by the progress and achievements of the last 20 years, the Heads of State and Government approved the Declaration of Turkeyen, which includes the following paragraph: “32. Heads of State and Government highlighted the importance of new information and communication technologies (ICTs) for enhancing the economic and social development of their people. In this regard, they reaffirmed their commitments made at the World Summit on information society at the Geneva and Tunis rounds to promote and consolidate an inclusive information society, and to overcome the digital divide. They also acknowledged the importance of the First Forum

on Internet Governance held in Athens in November 2006 where, from a participatory and multidisciplinary perspective, the issues of transparency, security, diversity and access with a view to promoting and guaranteeing the development of a global, reliable, and safe network, accessible to the entire population. Finally, Heads of State and Government underlined the importance of the Regional Plan for Latin America and the Caribbean for the Information Society, eLAC2007, as the most important regional initiative in this regard. They noted that the Second Regional Conference on the Information Society was held in San Salvador to assess the implementation of the 2007 Plan of Action and to formulate the Plan of Action for 2010, in the context of the fulfillment of the Millennium Development Goals and the Goals of the Plan of Action of the World Summit on the Information Society”. [<http://www.minfor.gov.gy/rio/>] 



Experiences and future plans for Digital Inclusion in LAC

Institute for Connectivity in the Americas (ICA) / Connectivity and Equity in the Americas (CEA) Team

In Latin America and the Caribbean (LAC), rapid socio-economic changes are increasingly affected by, and dependent on, Information and Communication Technologies (ICTs) as transversal elements that permeate all other aspects of the region's development. At the national, sub-regional, and regional levels new approaches are emerging as a way to tackle key development priorities such as poverty alleviation, and education and health improvements. ICTs are now seen as a key tool to provide innovative solutions to traditional problems.

The International Development Research Center (IDRC – www.idrc.ca) through the Institute for Connectivity in the Americas (ICA) and the Connectivity and Equity in the Americas (CEA) program initiative has been working for the past few years in the deployment, uses, knowledge development and capacity building of ICTs for development in LAC (see box).

In order to carry this work during the next five years both ICA and CEA will be focusing its efforts in three main areas: e-enablers, e-economy and e-citizenship.

e-Enablers

Health and education are universally recognized as issues that are the foundations of a nation's development, and socio-political and economic stability. They are also a pre-condition for individual development in any modern society. In other words, health and education are the two most important elements for leveling the playing field and increasing the likelihood of a more balanced distribution of resources within and across countries. Consequently, they are areas in which ICT implementation has the potential for producing a direct impact in the rise of more equitable societies.

In the *education* domain in LAC, most countries have undertaken efforts to provide computers to schools across the country. Very few of them however, have been able to develop and implement adequate policies for the user communities to appropriate those computers as effective and powerful educational tools. Development of adequate local content, teacher training, and a better understanding of the ways in which ICTs can act as key leverage towards a full insertion into the knowledge society, are all pivotal components often missing in the implementation of national ICT strategies

Canadian ICT cooperation projects

The Connectivity and Equity in the Americas (CEA) initiative supports applied research projects on pro-poor policies and on the impact of ICT's implementation on education, health, the information economy and e-government. CEA works with a wide range of actors from countries of Latin America and the Caribbean (LAC), with a particular emphasis in building research and institutional capacity among academic institutions, research centers, non-governmental organizations (NGOs) and other civil society institutions. For more information on CEA visit www.idrc.ca/cea.

The Institute for Connectivity in the Americas (ICA) is jointly supported by International Development Research Center (IDRC) and the Canadian International Development Agency (CIDA). During its forthcoming programming period ICA projects will focus more on the research agenda rather than infrastructure implementation initiatives. In doing so ICA supports initiatives with a mix of applied research and implementation components. ICA works with a wide range of actors in the region, including some of its current partners, such as multilateral organizations, governments and the private sector. For more information on ICA visit www.idrc.ca/ica.

Both initiatives share the same objective: they will seek to promote social and economic equity in the LAC region fostering the regional exchange of new knowledge through applied research on innovative ICT solutions to development problems. In doing so both CEA and ICA seek to build capacity in the region and empower its citizens to actively participate on and reap the benefits of the emerging knowledge-based society.

in LAC. Furthermore, large numbers of students from the poorest groups of society have yet to benefit from the information revolution, thus increasing even further the equity gap that affects the region.

One way in which IDRC has supported innovative solutions to improving education in LAC is through RELPE, the Latin American Network of Educational Portals (www.relpe.net). The objective of RELPE is to freely circulate and share educational materials produced



locally throughout the region and to improve quality and equity in education through the innovative application of ICTs in the education sector. Specifically, this initiative develops both the institutional linkages and the compatible software enabling content contribution and sharing. The project has received high praise from hundreds of teachers and high-level government officials in Latin America. Education Minister's of the region have praised RELPE for having the potential to bring the benefits of the information revolution to the 150 million students and teachers of primary and secondary schools in the region. In their view the network is truly important because it addresses two major bottlenecks: the development of relevant local content; and sharing of that content across the region, from Mexico to Patagonia. Additionally, the Latin American Schoolnets (REDAL) network and RELPE have made a substantive contribution to understanding the use and incorporation of ICTs in education, consolidating and developing strategies to strengthen REDAL network as recognized model for the integration of ICTs into education.

Other Education projects of IDRC are: the Pilot implementation analysis of the One Laptop per Child (OLPC) project (<http://www.ceibal.edu.uy/> and <http://olpc-ceibal.blogspot.com/>) and TRICALCAR: Weaving Community-Based Wireless Networks in Latin America and the Caribbean initiative (www.wilac.net/tricalcar/). The first one supports the roll-out and follow-up of the initial pilots in Argentina, Brazil, Chile, Colombia, Costa Rica and Uruguay. Uruguayan experts take the lead of these activities that will allow the analysis and assessment of the on-going pilots. A study is looking at the pros and cons of the initiative in developing countries. The TRICALCAR project, on the other hand, supports capacity building on community wireless networking in LAC. A group of wireless experts is building capacity among a large number of technicians in the region so that community-based wireless networks can be built at low cost in low income communities in the various countries of LAC. TRICALCAR will endeavor to strengthen the emerging network of local community-based wireless champions by facilitating the exchange of knowledge between them and with other like-minded actors in the region.

In the *health* sector a few selected providers have incorporated cutting-edge medical equipment, but little progress has been made in using ICTs as a innovative tool to help expand the reach of services to those who need them the most. Some ICT initiatives applied to health services for the poor that have been tested in other parts of the developing world are yet to be seen in the LAC region, where the majority of health professionals that have access to computers and the Internet hardly go beyond the use of e-mail as a substitute to voice telephony.

An example of an innovative approach to using ICTs in the health sector has been IDRC's *Punto "J"* project (www.puntoj.com.pe) in Peru. The aim of this initiative has been to promote youth participation and leadership in the fight against HIV/AIDS. The project has involved

youth leaders in the design and implementation of a Web portal that delivers youth-to-youth online education on issues of sexuality, sexual and reproductive health, and HIV/AIDS prevention. This project is now moving into its second phase and has received endorsement from the Peruvian Ministry of Health, and recognition and interest from numerous organizations and countries throughout the region.

Other example of innovative initiatives in the health sector is the project on Electronic Health Delivery using Open Source Software and Personal Digital Assistants (PDA). This project aims to strengthen primary healthcare delivery to vulnerable populations through the use of ICT, specifically, PDAs and free and open source software. Researchers will endeavor to make the electronic clinical registry based on free and open source software compatible with international health data standards; devise indicators for measuring the efficacy, applicability cost-effectiveness and impact of healthcare delivery using ICTs. The project is carried out in a partnership between the Universidad Austral (Argentina) and the e-health unit of the Fundación Santa Fe de Bogotá (Colombia).

e-Economy

The e-economy, a concept that refers in the broad sense to the use of ICTs for product and process innovation across all sectors of the economy, has emerged in the last decade as one of the primary engines of productivity and growth in the global economy. The transformation and/or disappearance of certain industries resulting from (or associated with) the rapid spread of ICTs, has evidenced the need for new economic strategies to enhance the capacity of the LAC region to adopt these new tools and exploit their potential in benefit of local economic needs and conditions.

In the production and trade sectors in LAC, the adoption and use of ICTs is more encouraging. A number of large companies have fully embraced ICTs for their operations and are pushing medium and smaller companies that interact with them to do the same. Furthermore, some governments have made considerable efforts to support the development of e-procurement with special attention to the promotion of public procurement opportunities for small and medium size enterprises (SMEs). However, there are sources of concern in the statistics that link ICTs with the potential of e-commerce and improvements in productivity. Only fifteen percent of the companies in the region, for example, have access to broadband services, an essential component in ecommerce-related activities. Furthermore, the presence of ICTs among micro producers of low-income groups is practically non-existent.

Examples of initiatives in this area are: (a) the Open Business Model in Latin America project and (b) the ICT4Bus program carried out in partnership with the Multilateral Investment Fund (MIF) of the Inter-American Development Bank (IDB).



The Open Business Model project is carried out by Centro de Tecnologia e Sociedade (CTS - Center for Technology and Society) of the Fundação Getulio Vargas (Brazil) and has examined the potential of content sharing as a countermovement to increasingly restrictive access to information and services. Researchers have investigated, mapped, analyzed and documented selected new open business models within the cultural and digital industries in Brazil and two other Latin American countries. They endeavor of this initiative is to demonstrate the innovative character and economic potential of the new digital content business models in which issues of intellectual property handled in new and creative ways by non-mainstream consumers markets.

The partnership with the ICT4BUS Program (www.iadb.org/ict4bus) of the Multilateral Investment Fund of the Inter-American Bank has been a productive and valuable one. A number of projects have been jointly funded under this cooperation scheme. Currently four projects will be co-funded in the phase of the initiative. Two of the projects that are given as examples of work in this area are: (1) “Strengthening the Craft Production Chain in the Puno Region of Peru”, that helps to improve access to national and international markets by SMEs and partnerships in the artisan textile sector of Puno, through the implementation of a service platform; and (2) “Networked Community for Organic Producers’ Market Access (OrganicsNet)” that will deploy an ICT-Based platform to support and boost SMEs production, commercialization and delivery of organic products in Brazil and abroad.

e-Citizenship

The concept of e-citizenship is based on emerging notions that traditional governance models are no longer sustainable, and new approaches to citizen participation, governance, and policy-making are required. Terms such as “active citizenship” are beginning to permeate traditional political structures, and new forms of interaction between government and citizens are unfolding. When translated to the realm of ICTs, democratic practices and citizen participation can be strengthened by the use of these tools to support and enhance the collaboration among relevant stakeholders throughout the policy-making cycle without the limitations of space, time, or other physical constraints.

Governments have also made significant progress in the modernization of public service provision. Several countries have considerably improved the implementation of e-government applications and services. In most cases, however, these developments have concentrated on traditional supply-side applications such as taxation and public procurement. Little progress has been made in increasing the transparency and accountability of the governance process through the use of ICT tools; this would allow for a more active and committed citizen participation in the acts of government. Furthermore, a large percentage of the LAC population

has limited access to the Internet and user support policies have been scarce. The result is that only a minority of citizens have benefited from any progress in the supply of e-government services, leaving behind a large number of those with less access to ICTs and the Internet. A couple of countries in the region are the exception; they have implemented user support initiatives such as national programs on digital literacy, user surveys on e-government services, and other related programs.

A major e-citizenship initiative launched by ICA and the OAS in 2004 is Red GEALC, the Network of E-Government Leaders in Latin America and the Caribbean (www.redgealc.net). The Network brings together more than 50 e-government leaders from 32 countries in the Americas in a space for exchanging knowledge, expertise and solutions regarding all e-government issues. Red GEALC’s main purpose is to provide people leading national e-government initiatives with the technical and financial support required to furnish quality services for their countries’ citizens. The Network is also a platform for e-government related activities such as online forums on e-government best practices from a number of countries in the region. This initiative has received financial support from the Inter-American Development Bank and is attracting the attention and support of a number of other international organizations such as the World Bank, ECLAC, UNDESA and the Development Gateway Foundation.

Other initiatives in the e-citizenship area are the “Impact of ICTs on Local Democracy: Transparency and Citizen Participation in the Municipality of Peñalolén (Chile)” (www.penalolen.cl) and “ICTs and Native People” (www.lofdigital.org.ar) projects. The first one analyzes the impact of implementing e-democracy and e-government strategies at the local level, with emphasis on the use and adoption of ICTs to strengthen transparency and citizen participation, based in the experience of the Municipality of Peñalolén, Chile. The second one collaborates in the integration of Argentina’s Indigenous people living in urban, semi-urban and rural areas, through the utilization of ICTs. The creation of a virtual community will allow for the preservation of native indigenous knowledge among the groups who have migrated to urban areas, and for the development of the capacity building of the rural indigenous people for the management of their own development.

In addition to the framework of the above-mentioned specific areas of focus, there are three key crosscutting issues to which CEA/ICA dedicate special attention: Policy Innovation, Appropriate Technologies, and Gender Perspective. Projects such as the Observatory for the Information Society in LAC (OSILAC) and the Regional Dialogue on the Information Society (DIRSI in Spanish) have been carried out in the crosscutting area of policy.

In the case of the OSILAC (www.cepal.org/socinfo/osilac/) this initiative supports national administrations in their efforts to increase



the quantity and quality of official statistics related to the emerging information society and economy in LAC. It also evaluates how National Statistical Offices (NSO) have incorporated ICT issues into their institutional capacity, and how much influence the project has exerted on policy- and decision-makers. Furthermore, OSILAC is providing technical assistance on ICT statistics to 19 countries in Latin America and is in early stages of work with six Caribbean countries.

The central objective of the DIRSI (www.dirsi.net) initiative is to support the achievement of pro-poor, pro-market, ICT regulatory and governance regimes in LAC countries, as well as assist in the development of a regional network including: applied and policy-oriented research; case studies; thematic studies; political-economy assessments; etc. Capacity building aimed at researchers, regulators, policy-makers, and other stakeholders is also supported as a way to stimulate macro- and

micro-economic assessments of the impact of regulatory reforms as well as ICT adoption in households and communities.

The road to digital inclusion in LAC is not the easy ride over the information highway that some regional leaders dreamt of not long ago. Progress towards digital inclusion requires a clear vision of the nature of development in the digital age and a strong and sustained political commitment to transform societal and political structures to respond to the new challenges and opportunities that come in hand with the rise of the information society. In this context it is very important that countries in the region become fully aware of the significant benefits that ICTs bring to their development agendas. It is only through these profound changes in the ways we produce and trade, educate and heal, participate and voice our views in the framework of truly democratic societies that the citizens of the Americas will be able to transit the road that will take them to a better and more equitable future 🌐

Investment in ICT is important for economic growth of Latin America and the Caribbean

Goal 26.2 from eLAC2007 point out to “elaborate corporative studies on economic and social impact of ICT”. Answering this call, international experts attended the seminar “Growth, Productivity and ICT,” organized by the Economic Commission for Latin America and the Caribbean (ECLAC) from the 29-30 March.

The general diagnosis was that information and communications technology (ICT) increase productivity and economic growth in the region. The seminar analyzed the contribution of ICT in Latin America, Europe and OECD countries, with presentations and studies based on original data and different analytical methods.

The seminar served as a venue for statisticians, analysts, policy-makers and regulators to share knowledge and studies from various perspectives and methodological approaches, a point underscored by ECLAC’s Executive Secretary, José Luis Machinea (video of his presentation is available on this site). ICT investment explains at least half of recent US growth, while in Latin America capital investment in ICT is lower than in developed countries. In the region, Chile and Mexico show the highest contributions in ICT investment, noted Harvard University economist Dale Jorgenson. The renowned academic also warned that diffusion has

been unsatisfactory in the region, saying there is stagnation in investment and productivity is far below the standards required for Latin America to improve its position on the path towards development.

But investment in information technology is not enough, pointed out Giovanni Dosi, of the Sant’Anna School of Advanced Studies, in Pisa, Italy. He said social changes are needed, to learning patterns as well as to private-sector organization and public policy. The participants concluded that low incomes and deficient education help to explain the fact that only 10% of Latin America and the Caribbean have access to computers and the Internet.

There was also consensus in that countries must place particular emphasis on fostering the diffusion of ICT, given the tremendous untapped opportunities in Latin America. This is particularly so when it comes to fostering the massive use of ICT, especially in service sectors. In the case of the ICT production industry in Brazil, for example, while supply patterns are similar to those observed in the US, demand-side relations with corporate users are much less pronounced. This indicates that the connections between ICT-producing sectors and ICT-using sectors must be strengthened 🌐



eLAC Policy Priorities Delphi: participative policy making for the development of Latin American and Caribbean Information Societies

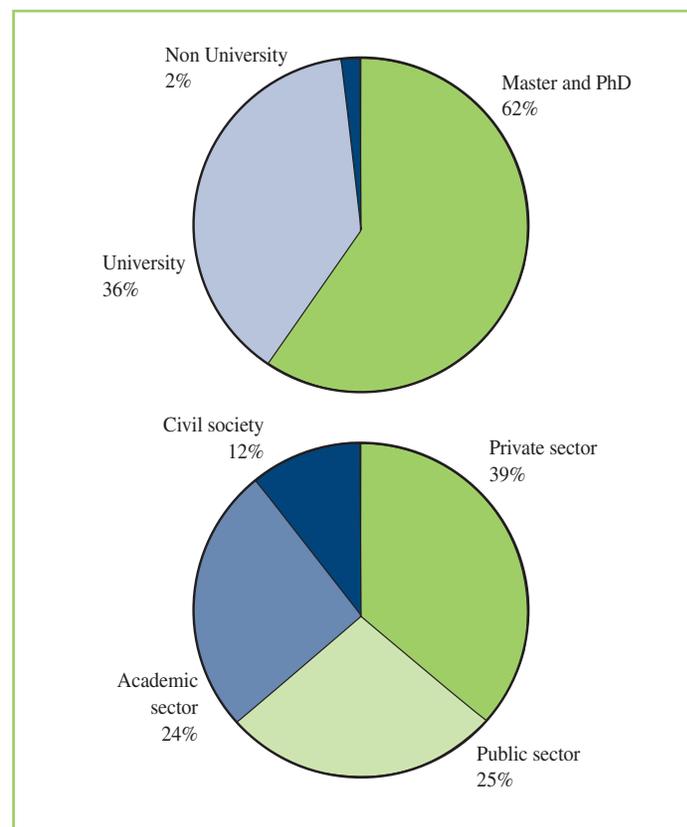
The eLAC Policy Priorities Delphi was carried out between April 2006 and September 2007 by ECLAC's Information Society Programme of the Division of Production, Productivity and Management (DDPE), with the financial assistance of the European Commission's @LIS project. Throughout the process, the exercise received methodological support from the Manchester Business School, especially from Professor Ian Miles, who has more than thirty years of experience with numerous Information Society foresight exercises in Europe.

The exercise aims at identifying public policy priorities and options for the use of Information and Communication Technologies (ICT) for the development of Latin America and the Caribbean. It has been inspired by the European Union's policy priority foresight experiences and represents an innovative and more participative form to modernize the way the United Nations assist its member countries in elaborating public policy agendas. Overall the exercise received more than 1,400 contributions from the public, private and academic sector and the civil society. To the knowledge of the authors it presents the most extensive online participative policy making exercise in the history of intergovernmental processes in Latin America and the Caribbean.

The eLAC Policy Priorities Delphi exercise has been designed in five rounds, implemented through three online questionnaires (1,274 contributions) and two face-to-face consultations (180 contributions). The design of a Policy Delphi proposes that the results of the previous rounds are provided as feedback into the respective later rounds, aiming at the reconsideration of judgements in the light of the opinions of the others, in order to identify fields of emerging consensus and potential differences of interests. As the eLAC community did not yet count with an established network of active stakeholders, the exercise has been designed as an open-ended opinion poll. The invitations for the three online questionnaires have been sent openly, with the request for further diffusion. 13 regional organizations joint this multi-stakeholder effort by the diffusion of the questionnaires with their networks by Email, posted on their Websites and included in their Newsletters and bulletin boards.

For practical reasons, the self-selection criterion was applied to define the expert group of stakeholders. The self-selection criterion was the disposition of the participant to complete the questionnaire. The high participation of participants with a masters or doctor degree (62%, see graph) proved that this criteria worked successfully in all three rounds. As shown by the graph, the use of online channels was very important to enable participation from the private and academic sector and civil society. 39% of the online contributions have been made by private sector experts, 24% from experts affiliated to the academic sector and 12% to civil society. Besides, the participation turned out to be very representative geographically.

Distribution of 1,274 online contributions according to education and professional affiliation of participants



For practical reasons, the self-selection criterion was the applied to define the expert group of stakeholders. The self-selection criterion was the disposition of the participant to complete the questionnaire. The high participation of participants with a masters or doctor degree (62%, see graph) proved that this criteria worked successfully in all three rounds. As shown by the graph, the use of online channels was very important to enable participation from the private and academic sector and civil society. 39% of the online contributions have been made by private sector experts, 24% from experts affiliated to the academic sector and 12% to civil society. Besides, the participation turned out to be very representative geographically.

The first Delphi round presented the 30 priority areas of Latin American and Caribbean Information Society development that had been identified by the countries of the region in their 2005-2007 Regional Action Plan eLAC2007. During April and June 2006, 155 participants contributed through the virtual eLAC platform (<http://www.eLAC2007.info>) by ranking these areas according to their social, economic and political impact for development until the year 2010 on a Likert scale from 1 to 5. Considering the ongoing dynamic of the ICT revolution, they suggested new fields of interest to be considered in the future.

During October and December 2006 the second round of the Delphi displayed the new rank of 47 priority issues for a new impact ranking. This time 501 experts from 22 countries of the region answered the online questionnaire. Despite the heterogeneous conditions in the region, the analysis of the second round shows a striking coherence in interests and a surprisingly large and stable consensus of priority areas. Connectivity for schools and local governments, ICT training for enterprises and the workforce, e-government and national Information Society strategies and agendas have been identified as the top priorities

for the region. Maintaining the need for prioritization that underlies existing eLAC2007, the top 30 issues have been selected to pass to the third round. Seven new issues entered the regional list of ICT priorities, while 23 areas of interest are the same as in eLAC2007.

The third round consisted in personal interviews with 116 experts from public, private and academic sector and civil society in 19 countries of the region. The interviews aimed at the elaboration of concrete goals and activities to implement the identified priority areas. 100 potential goals have been identified and presented to the regional stakeholder community for ranking during July and August 2007. 618 contributions have been made in this fourth round in order to fine-tune the content of the action points, to identify potential agencies that could contribute to implement them and to evaluate the importance of each activity for the regional development agenda until 2010.

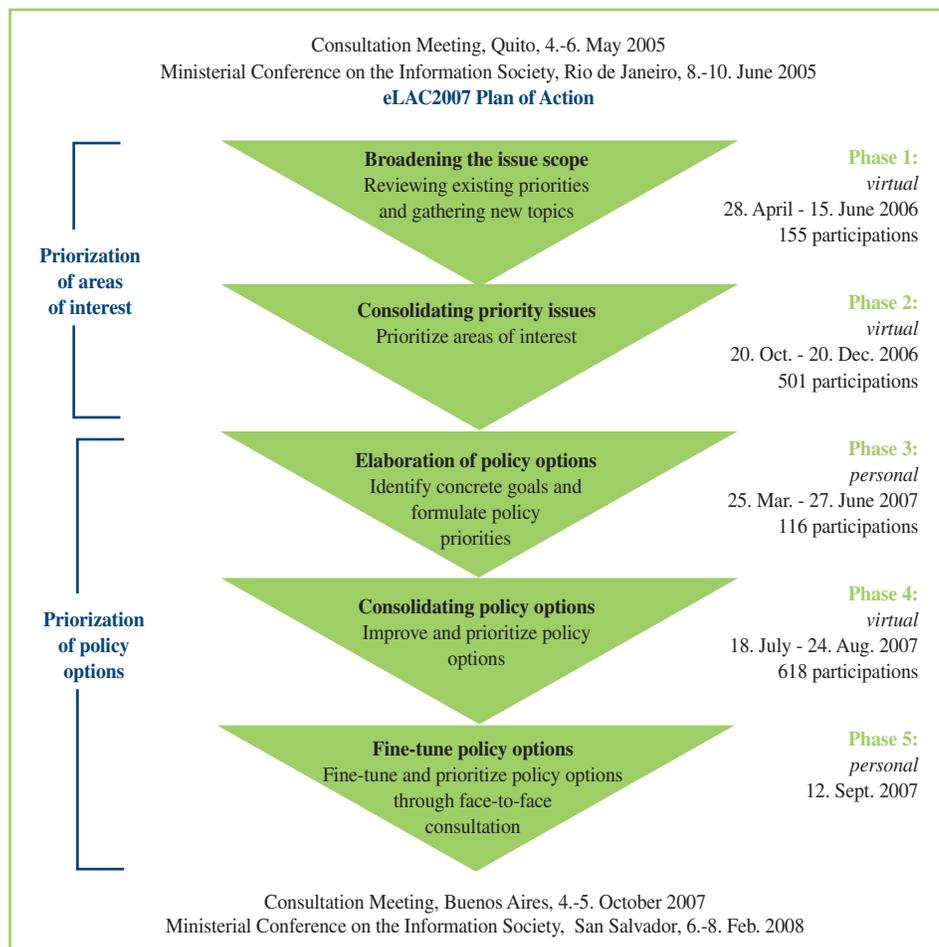
The fifth and final round of the Delphi exercise consisted in a face-to-face consultation with the main agencies from public and private sector and international NGOs from Latin America and the Caribbean. This inter-institutional meeting took place on the 12th of September 2007 at ECLAC's headquarters in Santiago de Chile. Intergovernmental organizations from the region, as well as private sector entities, academic networks and regionally active NGOs agencies contributed to the improvement of the final priority agenda for 2010.

The result of this process is presented in a final report called "eLAC Policy Priorities Delphi: Latin American and Caribbean multi-stakeholder consultation for ICT policy priorities for the year 2010" (<http://www.cepal.org/SocInfo>). It presents the constellation of interest groups and the existing structure of public opinion among the eLAC stakeholder community, including their priorities and concerns. The report serves as input for the regional consultations that take place

Entities that participated in the diffusion of the online questionnaires



Schematization of the five phases of the eLAC Policy Priorities Delphi



in Buenos Aires, 4-5 of October 2007, and for the Ministerial Conference of Latin America and the Caribbean for Information Society development, that takes place in San Salvador, 6-8 of February 2008. The exercise should provide the democratically elected representatives of the people of the region in their efforts to elaborate a new Regional Action Plan for Information Society development between 2007 and 2010.

The eLAC Policy Priorities Delphi experience shows the opportunities of international participative policy making in the digital age and the role the United Nations structure can play in it. The mechanism demonstrates that it is possible to benefit from the decentralized knowledge of the specialized multi-stakeholder community, while respecting the democratically legitimized representatives of the people through the established multilateral system. Transparency and interactive participation are two potential benefits of the Information Society and, while naturally being still being immature and imperfect, the eLAC Policy Priorities Delphi presents a first, successful attempt how to exploit them 

The Digital Solidarity Found will finance two projects of the region

The world-wide Digital Solidarity Found is the result of maintained global negotiations during the World Summit on the Information Society. In May 2007, the chosen projects are: “Reinforcement of a sustainable Cibercenter model, in the municipality of Carmen del Viboral, Oriente Antioqueño”, of Colombia and “Reinforcement of local management capacities and citizen participation with ICT support in municipalities with smaller Index of Human Development” of Cuba.

The Digital Solidarity Found invites all interested parties from Latin America and the Caribbean to present projects, specially related to the goals formulated by the region in the eLAC Plan of Action, offering to co-finance communitarian projects that involve ICT use. ECLAC, by means of its Information Society Program, is part of the scientific committee that evaluates the presented projects and has collaborated in their evaluation 



Recent publications

ECLAC - Infomation Society Programme

<http://www.eclac.org/SocInfo>



Manual de contratación pública electrónica para América Latina. Bases conceptuales, modelo legal, indicadores, parámetros de interoperabilidad

Gonzalo Suárez Beltrán and Roberto Laguado Giraldo.

April 2007.

<http://www.cepal.org/publicaciones/xml/8/28648/DocW130.pdf>

LC/W.130, 85 pages.

Complete 228-page version available at <http://www.ECLAC.org/SocInfo>.

Improving the public contracting process is an ongoing concern. Transparency is the most significant point of contact between the public and private sectors, and making government contracting more transparent helps to control corruption. This paper attempts to provide a theoretical framework for modernising government contracting through the use of information and communications technologies (especially the Internet). It is the result of an assessment of the region's systems, legislation, regulations and practices, as well as of the contexts and developments in public contracting systems. Its objective is to present a framework for countries that are currently implementing systems and modifying their regulations in this area, in order to provide guidelines and propose a theoretical model based on successful experiences in the Americas.



Asimetrías de información en el mercado de computadoras personales: los casos de financiación de PC para consumidores de bajos ingresos

M. Laplane, F. E. L. Rodrigues, F. Gutiérrez and F. Rojas.

March, 2007.

<http://www.cepal.org/publicaciones/xml/8/28528/Doc123.pdf>

LC/W.123, 42 pages.

In attempts to address the digital gap, a number of governments are developing various types of programmes for access to infrastructure at the national, regional and local levels. This paper describes and assesses three Latin American experiences: "Mi PC" in Argentina, "Computador para Todos" in Brazil, and "Mi Primer PC" in Chile. Approximately two years after the launch and subsequent phases of these programs, there are still no consolidated data or detailed studies on the results of each. Here, we assess the issues of equipment, financing, connectivity and training opportunities. The paper seeks to provide a preliminary assessment, based on the scant evidence available to date.



Information Society and public ICT policies in the Caribbean: a review of advances and challenges, policy instruments and country experiences

Carlos Miranda Levy, September 2007

<http://www.cepal.org/ddpe/publicaciones/xml/6/28646/W124.pdf>

LC/W, 59 pages.

The Caribbean region has an exceptional potential for becoming an international hub of ICT services hosting, outsourcing and delivery. Its strategic location, similar time zones and relative short distances to North, South and Central America major trading centers, make it an ideal choice for the establishment of "near-shore" business operations connected to business and economic activity throughout the continent. The CARICOM Single Market Economy, and its shared trade and economic policy framework, is a first step towards regional business integration. The positive experience, in countries like Barbados, Jamaica and Trinidad and Tobago, suggests that the rest of the region can benefit from participative formulation of National ICT Strategies. The region could leverage this expertise and enable mechanisms for cooperation, technical assistance, knowledge transfer so that other countries could benefit from these experiences. To do a proper assessment in combination with the technical cooperation, nine Caribbean countries, Bahamas, Barbados, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago were visited and interviews conducted locally with representatives of the Government, Civil Society, International Organizations and Private and Education Sector and presentations were given. The full report was presented and discussed with government representatives at the Regional ICT Policy Makers Seminar in Barbados, September 2006 (organized by the government of Barbados, ECLAC, UN ICT Task Force in collaboration with CARICOM) and the final report was completed after the consideration of all the suggestions and comments made by the local stakeholders.



Conceptualización de arquitectura de gobierno electrónico y plataforma de interoperabilidad para América Latina y el Caribe

Hernán Moreno Escobar, Hugo Sin Triana y Sérgio Caino Silveira Netto.

July, 2007.

LC/W.140, 146 pages.

ECLAC has decided to propose a conceptual framework for governmental interoperability in Latin America and the Caribbean



that can be developed through specific projects, designed to create knowledge and practices capable of benefiting all of the countries. The paper first describes the design's foundation and determinants, and analyses the current basis for interoperability designs in the region. In addition, it describes the requirements that need to be taken into account—and that could serve as guidelines in formulating a concept of interoperability. These considerations include both architecture and platform, and deal with organisational, semantic, technical and governance aspects of the problem. Requirements for initial applications are examined in depth, so that results can be achieved with optimum speed, thus ensuring that the products and experiences gained can be replicated on a larger scale in other countries. The current work is aimed specifically at establishing a pilot interoperability project dealing with Brazilian-Colombian foreign trade. A compilation of the experiences of these two countries is included, as well as a preliminary description of the information flows. Modelling of the requirements for interoperability between existing applications being used in the two countries, in respect to foreign trade, has been carried out.



Banda ancha y gobiernos locales: evaluación de experiencias y recomendaciones

Germán Pérez Benitez
September, 2007.
LC/W., 158 pages.

This document presents the results of a study commissioned by ECLAC. It is divided into three parts. The first sets forth conceptual frameworks, for both broadband and local government. The second focuses on selected case studies, both within and beyond Latin America. In the latter, we have focused principally on specific experiences, such as those in Salamanca, Chile, Rafaela (Argentina), Monterrey (Mexico), Puerto Montt (Chile), Chachapoyas (Peru), and Mexico City. First, an overview of the broadband market in the countries where the case studies are located is provided. This is followed by the case studies themselves. We have also dealt with dominant municipal operators and cooperatives, given the strong interest in both of these areas. The third and final section presents the study's conclusions. After focusing on infrastructure as the principal factor to be used in identifying "local broadband," we mention potential triggers of local action, listing and prioritising them; factors important to success (whether general or specific); and instruments used to affect supply and demand, as well as tools—for participation, financing and technology. The principal lesson learned is the need to consider intervention by local governments in the field of broadband as a local issue, one that involves both supply and demand.



Compendium of practices on implementation of ICT questions in households and business surveys in Latin America and the Caribbean

Observatory for the Information Society in Latin America and the Caribbean, in cooperation with the working group on harmonising ICT statistics—part of ECLAC's Statistical Conference of the Americas.
September, 2007.
LC/W, 52 pages.

The experiences of Latin American and Caribbean countries that have incorporated key ICT access and use questions in their household and business surveys are described here. The compendium attempts to provide contributions in two ways: (i) by bringing together in one place the experiences of the various countries, along with information on their approaches to gathering information on ICT access and use; and (ii) by providing input and support material useful to those responsible for collecting ICT statistics in the countries of the region. Countries whose experiences and processes are described here include, for household indicators, Argentina, Brazil, Costa Rica, Cuba, El Salvador, Mexico, Paraguay, Peru, Dominican Republic and Uruguay; and, for business indicators, Argentina, Chile, Peru and Uruguay.



Convergencia tecnológica y agenda regulatoria de las telecomunicaciones en América Latina

Marcio Wohlers. Junio 2007
LC/W., 48 pág.

Increasing technological convergence in the communications sector, particularly the recent trend toward the widespread supplying of services using a broadband IP platform, is radically shifting the borders between ICT firms, markets and sectors. The regulatory impact of convergence is pervasive; thus, the sector's rules, laws and regulations, as well as the originating segments, must be adapted and updated. The new environment has made the underlying regulatory logic obsolete. This document defines convergence, and describes some of its major economic impacts on the industrial organisation of the ICT "macro sector" (i.e., telecommunications, IT, and audiovisual industries). It also presents an analytical framework that conceives of convergence as an integral element of the regulatory structure, which must now be designed to broaden competition in the telecommunications sector. The paper briefly describes examples of pro-convergence changes in the regulatory frameworks of a number of developed countries, including the United States and certain European nations. It also assesses initiatives in some LAC countries to establish a pro-convergence regulatory agenda. Finally, the document presents scenarios of possible results of addressing convergence in the region's regulatory structures.



Regional progress in creating indicators for ICT access and use

The fourth meeting of the Statistical Conference of the Americas (SCA), held at ECLAC in Santiago, Chile on June 25-27, brought together officials from the region's national statistics agencies. The working group on measuring ICTs, coordinated by the Dominican Republic's National Statistics Office and the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) presented a report on the state of progress in harmonising and creating indicators of ICT access and use.

The OSILAC Information System was also presented. This system contains information on the progress of ICTs in the countries of the region. The system includes subsystems with information on ICTs in homes and businesses, censuses, infrastructure, as well as on access to and use of ICTs in various sectors of society. In its first phase, the system covers only information on homes and individuals, this being the first time that a single, publicly available system of information has incorporated information from household surveys in various Latin American countries. The hope is that the system will be widely used by policymakers in the region, as well as by the academic and private sectors. Meanwhile, as part of the mandate of the SCA, there will be continued efforts to encourage countries to send their ICT indicators to OSILAC, and the current OSILAC information system will be maintained and updated on an ongoing basis. A compendium of practices involved in incorporating ICT issues in household and business surveys was also presented at the meeting. It includes information on practices by different countries in the region, and is offered as a useful monitoring tool, based on measurements already made, as well as for countries beginning the process.

The list of key ICT indicators (see <http://www.ECLAC.org/SocInfo/OSILAC>), which was internationally agreed in February 2005 and approved for global use by the United Nations Statistical Commission in February 2007 (see <http://unstats.un.org>), has now been approved by the SCA members. This should lead to more of the region's statistical agencies incorporating key ICT indicators in their regular—typically annual or biennial—household and business surveys. The key indicators for households include ten indicators designated as basic, and three so-called extended indicators, as well as a reference indicator on access to

electricity. The list for businesses includes eight basic indicators and four extended indicators. Both basic and extended indicators measure access to and use of ICT goods and services.

Currently, 10 Latin American and Caribbean countries have collected information on nearly all of the household ICT indicators. Two more have done so on a partial basis in household surveys, and eight in business surveys. In total, between 2005 and 2006, 15 of the region's countries incorporated at least one question on Internet use in their surveys. In 13 cases, the surveys involved are household surveys; in 6 of these cases, the question was also incorporated in the countries' business surveys; while in 2 cases, the question was incorporated in business surveys only. 18 countries incorporated the key access indicators reflecting ownership of ICT goods (radio, TV, landline and cellular phones, computer and Internet) in household surveys, as one component of data regarding equipment, in at least one survey between 2004 and 2006 

www.eclac.org/tic/flash/default.asp?idioma=IN



Country	Description	Year	Cobertura	Period
<input type="checkbox"/> Brazil	Pesquisa nacional por amostra Domicilios (PNAD)	2005		Complete Year
<input type="checkbox"/> Brazil	Pesquisa nacional por amostra Domicilios (PNAD)	2004	national	Complete Year
<input type="checkbox"/> Chile	Encuesta Casen	2003	national	November-December
<input type="checkbox"/> Costa Rica	Encuesta de Hogares de propósitos múltiples	2005		Complete Year
<input type="checkbox"/> Costa Rica	Encuesta de Hogares de propósitos múltiples	2004		July
<input type="checkbox"/> Paraguay	Encuesta permanente de hogares	2005	National	October-December
<input type="checkbox"/> Paraguay	Encuesta permanente de hogares	2004	National	August-November
<input type="checkbox"/> Uruguay	Encuesta Continua de hogares	2005	Urban area	Complete Year
<input type="checkbox"/> Uruguay	Encuesta Continua de hogares	2004	Urban area	Complete Year
<input type="checkbox"/> Venezuela	Encuesta de Hogares por Muestreo	2005	National	Second semester
<input type="checkbox"/> Venezuela	Encuesta de Hogares por Muestreo	2004	National	Second semester

¹ OSILAC Information System, www.eclac.org/osilac.

² List of ICT households and enterprise core indicators, www.eclac.org/socinfo/osilac.

The opinions expressed in this publication are the exclusive responsibility of the authors and may not coincide with those of the organizations concerned. Nor do they reflect the official position of the European Union, which has assisted financially with the preparation of this publication.

ECLAC, SOCINFO Programme, Division of Production, Productivity and Management
 Dag Hammarskjöld 3477, Vitacura, Santiago, Chile – Tel.: +562 210 2239 or +562 210 2000 - Fax: +562 210 2590
 Internet site: www.cepal.org/socinfo - Email: socinfo@cepal.org

