

In the midst of the implementation of

# eLAC2007

*A plan of action for Latin America and the Caribbean*

March, 2007

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### El Salvador announces date of the II Ministerial Conference about the Information Society, eLAC2007

The government of El Salvador announced that the II Ministerial Conference about the Information Society eLAC2007, will be held next **6, 7 and 8 November of 2007 in El Salvador**. The region will evaluate the implementation of eLAC2007 and could adopt new goals and objectives. [\(More on page 28\)](#)



### Progress towards implementation of the eLAC2007

Another step was taken for the implementation of the Regional Plan of Action when the third eLAC2007 implementation meeting was held at ECLAC headquarters in Santiago, Chile, on 27 and 28 November 2006. [\(More on page 2\)](#)

Progress reports have been submitted by the working groups, governments and legitimized representatives from the civil society and private sector are active in the implementation of their tasks, namely: Telework, Creative and content industries, Electronic government, Software, Alternative technologies, Financing, Research and education networks and Legislative framework. [\(More on page 9\)](#)



### Interoperability and e-government

In Latin America and the Caribbean e-government is seen as offering an efficient way of exchanging data between their information systems, but for this they need to decide on standard data sharing formats and regulatory policies and establish technological platforms to ensure that information will be held securely and public resources invested efficiently. To address this challenges, the Second Red GEALC Thematic Workshop was held in Bogotá, Colombia as part of the regional public goods program of the Inter-American Development Bank, centering on the subject of "Interoperability and Government Intranet", hosted by the Columbian Connectivity Agenda and jointly organized by the IDB, ICA, ECLAC and OAS. [\(More on page 17\)](#)

### Lack of information about the Information Society in LAC and solutions under development

The National Statistical Offices (NSOs) of the region are working to help establish common methodologies for the harmonization of ICT statistics. At the Third Workshop on Information Society Measurement, held in Panama City in November 2006, the countries emphasized the importance of having access to a set of measurements that are comparable over time and can be used to evaluate the state of progress in each country of the region. [\(More on page 15\)](#)

The 38th session of the UN Statistical Commission received the report of the Partnership on Measuring ICT for Development with an overwhelming support and a consensus was expressed to endorse the core list of ICT indicators. [\(More on page 14\)](#)



### Focus on the Caribbean: a lot going on and a lot to do for public policies

The Caribbean region often refers to the potential of becoming an international hub of digital service hosting, outsourcing and delivery. A report presented at the Caribbean ICT Policy Makers Seminar identified current challenges in national development strategies and also discuss policy implementation issues.

The Seminar was organized by the government of Barbados, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and its Subregional Headquarters for the Caribbean, with financial support from the United Nations ICT Task Force and with the collaboration of the CARICOM Secretariat. [\(More on page 16 and 22\)](#)



ECLAC



# Progress towards implementation of the Regional Plan of Action for the Information Society in Latin America and the Caribbean (eLAC2007)

*Report from the eLAC2007 Regional Follow-up Mechanism  
Brazil, Ecuador, El Salvador, Trinidad and Tobago*

The region is advancing with implementation of its Regional Plan of Action, eLAC2007. The third eLAC2007 implementation meeting was held on 27 and 28 November 2006 at ECLAC headquarters in Santiago, Chile. There is now a greater degree of consensus on the positive relationship between the absorption, creation and dissemination of knowledge and information and their impact on productivity, growth, the welfare of the region's countries, the efficiency and transparency of its public sectors and the quality of life of its citizens in general. Considering the deep economic and social inequalities in the region, there is great significance in this acceptance that more equal opportunities can be achieved by universalizing access to these technologies and digital networks and spreading the skills required to use them. At the same time, there is an increasing understanding of the structural and institutional factors preventing the spread of information and communication technologies (ICTs) in the region and making them harder to access and use.

The creation of an enabling environment for the development of information societies requires each and every one of the countries to formulate policy instruments and engage in efforts to expand access to infrastructure and incorporate the use of ICTs into the public sector as far and as fast as can reasonably be managed, without neglecting the need for capacity-building at every level of society.

The outcome of this should be a public digital policy encompassing aspects such as the regulation of telecommunications, education, e-government, health care, promotion of ICT industries and adaptation of the legal framework. The objective is to accelerate ICT dissemination and learning to support strategies of development with equity. This could require regulatory adjustments, legal changes, appropriate financial instruments, capacity-building and an ongoing effort to modernize public-sector management.

Initiatives to launch public policies based on cooperation between the public and private sectors and civil society and to ensure that new technologies and digital networks become tools of economic and social development are gradually taking hold throughout Latin America and the Caribbean, creating options for cooperation, the sharing of best practices, economies of scale and lower learning costs.

Seizing the historical opportunity represented by the World Summit on the Information Society (WSIS), on top of the existing political consensus in the region and the similarity of the ICT challenges they faced, the countries of Latin America and the Caribbean drew up their Regional Plan of Action for 2005-2007 as a first step in setting priorities and preparing specific projects in the run-up to 2015.

One milestone in the eLAC process was resolution 629, passed at the Thirty-First Session of ECLAC in Montevideo. In it, the countries of the region recognized eLAC as a process starting in 2005 and continuing until 2015, the year chosen by the World Summit on the Information Society for reviewing progress at the global level.

The present article sets out to describe what the eLAC2007 Regional Plan of Action consists in, first describing the background to its creation and then turning to the plan itself and analysing its structure, content and implementation and benchmarking mechanisms.

## The background to eLAC2007

The World Summit on the Information Society (WSIS) was held in two phases: Geneva in 2003 and Tunis in 2005. What came out of Geneva were the Declaration of Principles and the Plan of Action. The Tunis event produced the Tunis Commitment and the Agenda for the Information Society.

In 2005, an agreed political commitment was accepted by 175 countries, involving a Declaration of Principles that delineates 67 guiding principles and a Plan of Action that outlines 167 goals in the form of global challenges to be achieved by 2015 within the context of the Millennium Development Goals, whose deadline is also 2015.

The consensus reached at the WSIS involved different groupings such as Africa and the G8, so many of the 167 actions do not necessarily have a direct bearing on Latin America and the Caribbean. The idea behind the creation of a Regional Plan of Action, therefore, was to identify those that were most urgent and important, and the result was a selection of 30 goals and 70 activities to be implemented during



2005-2007<sup>1</sup>. Thus, the Plan has been designed as an operational tool for attaining the Millennium Development Goals (MDGs) and those of the World Summit on the Information Society (WSIS). In the run-up to the WSIS, the region concentrated on building up a political consensus and a common strategic vision. On several occasions, the countries of Latin America and the Caribbean have formulated political declarations on the strategic direction of the information society and the governing principles that must guide a public policy of this nature<sup>2</sup>.

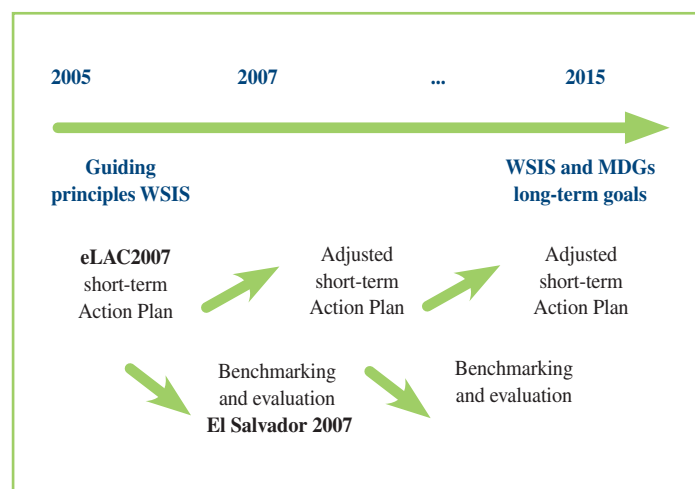
At the Rio de Janeiro Regional Conference of June 2005, several years of dialogue on the relationship between ICTs, growth and equity culminated, against the background of the WSIS, in a regional plan of action known as eLAC2007.

eLAC2007 was created as a regional response to the Geneva Plan of Action, with a subgroup of the Geneva Plan of Action goals being selected and adapted to the regional situation.

Also worth emphasizing are the national efforts and initiatives that have likewise strengthened progress towards the objective of laying the groundwork for the information society in the region. Of the national strategies in place, mention may be made of those of Chile, Colombia, the Dominican Republic, Jamaica, Peru and Trinidad and Tobago<sup>3</sup>.

One major challenge is the eminently dynamic character of the ICT sector. Consequently, the Plan of Action, while inspired by the long-term vision of the WSIS and the MDGs, which converge in 2015, is stated in the short term so that the countries have the opportunity to review goal fulfilment and reformulate the objectives along the way, strengthening the provisions or introducing significant changes. In this way, eLAC2007 serves as an intermediary between the global goals and the specific needs of the region's countries in accordance with the particular situation of each, the aim being to promote national strategies in the light of the vision for the region.

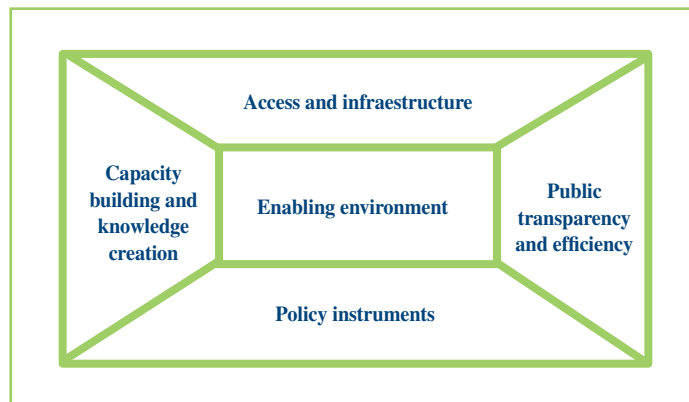
### Long term vision, short-term actions



### Content of eLAC2007

The countries of Latin America and the Caribbean have identified five critical areas for the digital policy agenda, including: access to infrastructure, capacity-building and knowledge creation, the transparency and efficiency of content and services provided to the public, policy instruments and enabling environment. The 30 goals of the eLAC2007 Action Plan are distributed among these areas.

### Structure of the eLAC2007 regional Action Plan



Source: see <http://www.cepal.org/SocInfo/eLAC>

### Goals of the eLAC2007 Action Plan by critical areas

#### A. ACCESS AND DIGITAL INCLUSION

1. Regional infrastructure
2. Community centres
3. Online schools and libraries
4. Online health centres
5. Employment
6. Local government
7. Alternative technologies

#### B. CAPACITY-BUILDING AND KNOWLEDGE CREATION

8. Software
9. Training
10. Research and education networks
11. Science and technology
12. Firms
13. Creative and content industries
14. Internet governance

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

2 This effort is reflected in the following declarations, among other things: Declaration of Florianopolis (July 2000), Itacuruçá Declaration (October 2000), Decision of the Foreign Relations Ministers of the Rio Group to set up a working group on information technologies (March 2001), Rio de Janeiro Declaration on ICT for Development (June 2001), Agenda for Connectivity in the Americas and Quito Plan of Action (August 2002), Bávaro Declaration (January 2003) and the Rio de Janeiro Commitment (June 2005).

3 See: <http://www.agendadigital.cl>, <http://www.agenda.gov.co>, <http://www.edominicana.gov.do>, <http://www.cito.gov.jm>, <http://www.e-mexico.gob.mx>, <http://www.codesi.gob.pe>, <http://www.fastforward.tt>



## C. PUBLIC TRANSPARENCY AND EFFICIENCY

15. Electronic government
16. Electronic education
17. Electronic health
18. Disasters
19. Electronic justice
20. Environmental protection
21. Public information and cultural heritage

## D. POLICY INSTRUMENTS

22. National strategies
23. Financing
24. Universal access policies
25. Legislative framework
26. Indicators and measurement

## E. ENABLING ENVIRONMENT

27. World Summit follow-up and implementation of eLAC2007
28. Assistance to less developed countries in the region
29. Proposals for overcoming obstacles to the effective implementation of national strategies for the development of the information society
30. Safeguard the use of the radioelectric spectrum

There are 70 activities associated with the 30 goals of the plan. In combination, they are intended to secure three types of potential benefits:

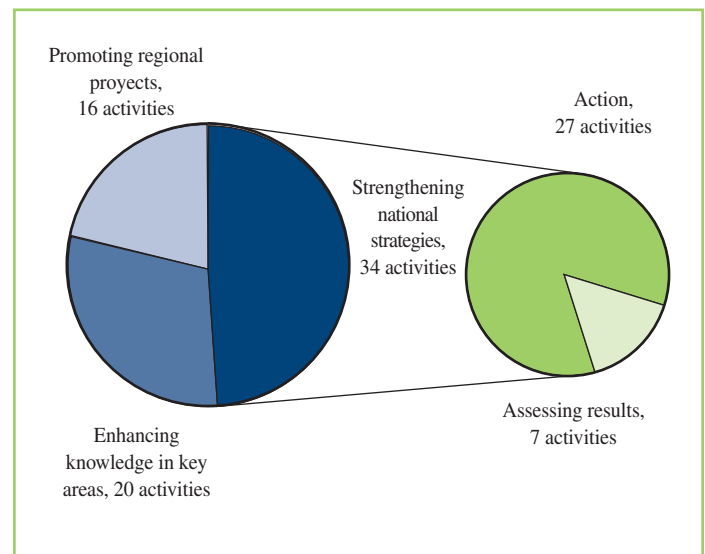
- **Promoting regional projects.** The aim is to create, support and reinforce concrete initiatives and regional projects. Actions include:
  - Develop and expand advanced ICT-based networks for research and education (activity 10.1),
  - Create and/or strengthen instruments for exchanging e-government services, such as the e-Government Network of Latin America and the Caribbean (Red GEALC), developing regional cooperation for the transfer of technologies (activity 15.1),
  - Link national educational portals with a view to establishing a Latin American and Caribbean network of educational portals (activity 16.2),
  - Strengthen multi-stakeholder partnerships between governments, the private sector, non-governmental organizations and the scientific and academic community, e.g., governments, LACNIC, LACcctld and Alfa-Redi, among others.
- **Boosting national strategies.** The aim is to implement national initiatives through intraregional technology transfer and capacity-building, and the actions for this purpose include:
  - Double the number of State schools connected to the Internet or connect one third of them (activity 3.1),
  - Connect at least half of local urban governments and one third of local rural governments to the Internet (activity 6.1),
  - Provide ICT literacy training to at least 2.5% of the working-age population annually (activity 9.1),

- Reduce by half the potential national average user base per community Internet access centre, or reduce coverage to 20,000 people per centre; foster the quality and ensure the sustainability of Internet access centres (activities 2.1 and 2.2).

- **Focusing on critical subject areas.** The aim is to enhance knowledge and understanding in areas that are critical to policy definition, design, implementation and evaluation, and actions include:
  - Create a regional working group to elaborate proposals on options and strategies for the development of digital television (activity 7.1),
  - Establish a regional working group to exchange experiences and criteria used for the development and use of open-source software and free software (activity 8.1),
  - Establish a working group to evaluate national and regional financing needs (activity 23.1).

Thus, depending on their potential benefits, the different activities deriving from eLAC2007 can be classified by their orientation into those that focus on a particular action and those intended to achieve quantitative results (see chart). Action-oriented activities are associated with the promotion of regional projects and the enhancement of knowledge in critical subject areas, and where national strategies are concerned there are both action-oriented and results-oriented activities. The situation is illustrated in the chart, which shows the distribution of eLAC2007 activities in accordance with the classification criteria referred to.

### Distribution of activities in the Regional Action Plan



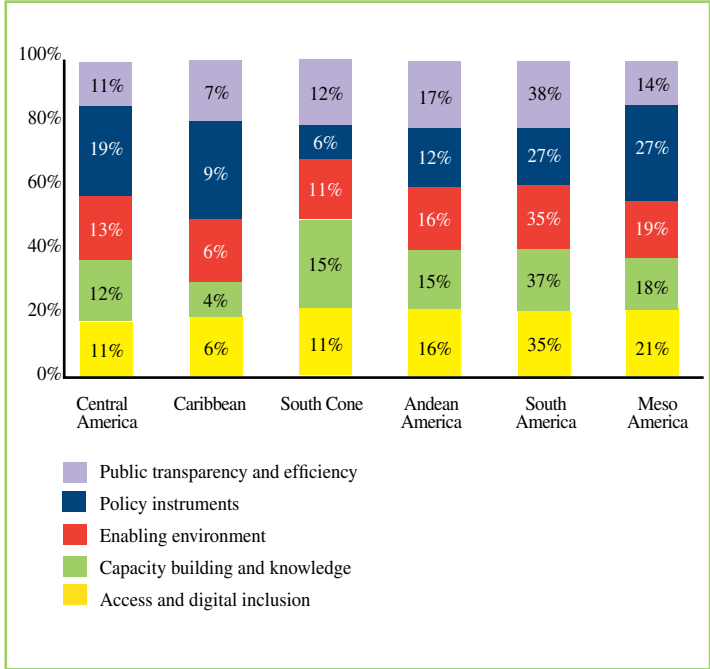
The existence of regional projects creates a basis for lines of action to promote cooperation and the sharing of experiences among the countries of Latin America and the Caribbean, and in fact 16 actions can be identified as having this objective. A large number of activities (20 of the 70 proposed actions in eLAC2007) are focused on enhancing knowledge in key areas. This is evidence that there are still issues of common interest



to all the countries in the region that require further analysis and study to generate the knowledge needed to deal with them in future.

It is striking that most of the activities established in eLAC2007 (34) centre on promoting national efforts, making this plan a tool for sharing experiences and thereby capitalizing on the benefits of the progress made in the different countries of the region. This shows that, with the eLAC2007 Regional Plan of Action, governments are looking to boost their national policies in the field of digital technologies and networks, while also recognizing the opportunities for greater regional cooperation.

**Distribution of PROTIC projects by eLAC category and region**

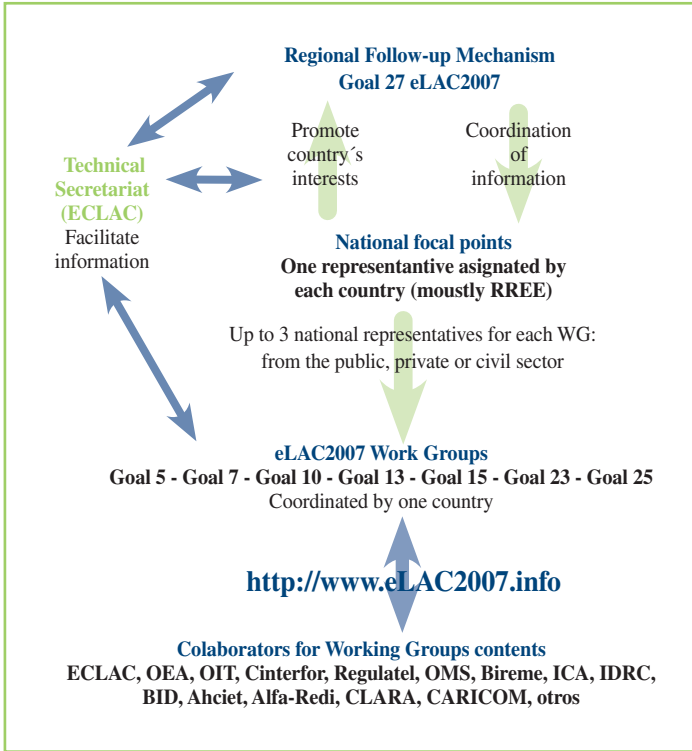


Examining the distribution of activities carried out to boost national policies shows that most of them set out to promote actions in particular fields (27 activities), an example being: “Promote ICT training programmes for local public officials” (activity 6.3). Furthermore, the action plan is designed in such a way as to stimulate national measures, as targets are set for quantifiable results to be achieved by applying policies of different kinds, for example: “Train at least one third of teachers in the use of ICTs” (activity 3.3). Because these results are shared and are defined in relative terms, eLAC2007 should also serve the purpose of laying down minimum standards as a policy objective. The purpose of this effort is to ensure a minimum level of inclusion in the information society for all citizens of Latin America and the Caribbean; it does not mean, however, that some countries cannot go beyond this common denominator. It is noteworthy that the eLAC2007 Plan of Action lays down quantifiable goals despite the difficulty involved in this, as reflected in the small number of activities with this orientation: just 7 activities out of a total of 70.

In mid-2006, ECLAC conducted an initial survey of the potential impact of the different eLAC2007 goals with 155 experts on the information society in the region<sup>4</sup>. The conclusion reached in this initial exercise was that the goals relating to information society access had great social development potential. Goals relating to training and skills for human resources are seen by the community as contributing to economic development, and goals that promote some coordination activity, such as working groups and national strategies, for example, are perceived as having a positive impact in the political realm. The fact that eLAC2007 is seen as making an economic, social and political contribution shows the potential of ICTs for different aspects of development in Latin America and the Caribbean. In comparison, the agendas of other regions, such as e-Europe/i2010, prioritize the impact of ICTs in the area of growth and employment, and are thus more limited in scope than the agenda of our region.

**Implementation of eLAC2007**

To enhance implementation of the Plan of Action, each country in the region has to designate a National Focal Point responsible for transparently organizing national participation in the working groups established as part of eLAC2007. The implementation process is coordinated by a Regional Follow-up Mechanism comprising Ecuador, El Salvador, Brazil and Trinidad and Tobago (see chart).



<sup>4</sup> See ECLAC, 2006, eLAC Foresight, Results first round about ICT for the year 2010, <http://www.cepal.org/SocInfo>

There are currently working groups dealing with subjects such as Telework, Alternative technologies, Software, Research and education networks, Creative and content industries, Electronic government, Financing and Legislative framework, each working towards a specific target in the eLAC2007 Action Plan. The public and private sectors and civil society in each country can participate in the working groups, it being the responsibility of the National Focal Point to notify the Regional Follow-up Mechanism of the names of its representatives on the different eLAC2007 working groups. The working groups carry out their activities in the Virtual Collaborative Space (<http://www.eLAC2007.info>), which has been operating since April 2006. The following table details the different working groups formed to date, the member countries, and the activities associated with the target for each group.

Each working group has developed working plans to implement the activities referred to. Thus, for example, the Financing working group conducted a wide-ranging survey of ICT financing priorities in the region to obtain the information required for proposals for new mechanisms to address these needs in each country. For its part, the Legislative framework working group is going to initiate research into aspects of information society regulation in the region, dealing with cybercrime, electronic transactions, and privacy and data protection. By meeting the specific goals of eLAC2007, the working groups are enhancing knowledge and understanding in critical areas to support public policy-making, creating and consolidating concrete regional initiatives and projects.

eLAC goal	Group objective	Coord. country	Group members	Activities
5	Employment	ARG	ARG, BOL, COL, SLV, NIC, DOM, URY	Promote ICT capacity-building for the development of new forms of work and telework, encouraging their application, in particular, for local job creation. Facilitate the creation of a network of social stakeholders to foster an exchange of experiences and to formulate proposals for creating local employment and jobs. Maintain updated information on necessary skills and knowledge to ensure the region's inclusive and sustainable development.
7	Alternative technologies	COL	ARG, BRB, BRA, COL, CHL, MEX, PER, DOM	Elaborate proposals on options and strategies for the development of digital television and other wired and wireless technologies in Latin America and the Caribbean, examining standards, interactivity and applications for the provision of universal access. Consider carrying out, among other activities of the group, pilot tests of digital television applications and other available interactive technologies under different circumstances and in various countries of the region.
8	Software	BRA	ARG, BRA, COL, CHL, MEX, PER, DOM	Exchange experiences and criteria used for the development and use of open-source software and free software, which includes studies on technical, economic, organizational, training and security challenges. In the context of criteria of efficiency and social inclusion, analyse the use of proprietary software in order to disseminate best practices and to maximize efficiency, coexistence with other forms of licensing, interoperability and possibilities of migration.
10	Advanced networks	URY	ARG, BOL, BRA, CHL, COL, CRI, CUB, ECU, SLV, GTM, HND, MEX, NIC, PAN, PRY, PER, URY, VEN	Develop and expand at the national, subregional -especially in the Caribbean- and regional levels advanced ICT-based networks for research and education while strengthening existing networks, such as the Latin American Cooperation of Advanced Networks (CLARA).
13	Creative and content industries	ARG	ARG, BOL, BRA, COL, CHL, MEX, NIC, PER, DOM, URY	Research the development and challenges of creative industries and content-development industries, while forming regional cooperation mechanisms and seeking solutions for common problems, such as the financing of an economy of intangible goods, distribution of cultural goods and services, and communication in the region, and perfecting the capacity for local production of content that respects diversity and cultural identity.
15	Electronic government	NIC	ARG, BRB, BRA, COL, CHL, SLV, JAM, MEX, NIC, PER, DOM, URY	Elaborate an agenda of priorities for the implementation of interoperability standards for e-government services.
23	Financing	ARG	ARG, BOL, COL, SLV, NIC, PAN, PRY, PER, DOM, URY	Evaluate national and regional needs for financing ICT development. Suggest initiatives for optimizing the use of financial resources and instruments and, if necessary, propose new ones, with the aim of mobilizing more resources, considering subregional, regional and international financial and cooperation agencies and the particular features of each country.
25	Legislative framework	PER	ARG, COL, CHL, SLV, MEX, PER, DOM	Promote and foster policies for harmonizing norms and standards, with the aim of establishing legislative frameworks that merit trust and offer security at both the national and regional levels, paying special attention to legislation on the protection of privacy and personal data, cybercrime and ICT crime, spam, digital or electronic signatures, and electronic contracts as a framework for the development of the Information Society.



Implementation of eLAC2007 naturally draws upon different initiatives by international and regional agencies, civil society and, incipiently, the private sector, preparing and undertaking projects that are yielding their first results in the form of concrete initiatives. The Inventory of Information and Communication Technology Projects for Latin America and the Caribbean (PROTIC) shows that more than 1,000 ICT-related projects are being conducted, with applications in different spheres and sectors in the region<sup>5</sup>. Although it does not claim to be a complete and exhaustive database, this inventory shows how many projects are pursuing ICTs for development in the region.

In addition to these local initiatives, there are mutually reinforcing inter-agency cooperation programmes with the broader vision of information society development in Latin America and the Caribbean promoted by eLAC2007, including:

- Goal 26 (Indicators and measurement): Observatory for the Information Society in Latin America and the Caribbean (OSILAC), an initiative of ECLAC, ICA-PanAmerica-IDRC and the European Commission's @LIS within the framework of the Statistical Conference of the Americas: <http://www.cepal.org/SocInfo/OSILAC>.
- Goal 15 (Electronic government): eGe (E-government Effectiveness Inter-Agency Task Force), established jointly by the Secretary General of the Organization of American States (especially the Red GEALC), the Development Gateway Foundation, the Inter-American Development Bank, the United Nations Department of Economic and Social Affairs, the World Bank, the Institute for Connectivity in the Americas (ICA) and ECLAC: <http://www.ege-tf.org>.
- Goal 10 (Research and education networks): The Latin American Cooperation of Advanced Networks (CLARA): <http://www.redclara.net>.

These advances show that governments, international agencies, civil society and the private sector have incorporated the international aspect into their agenda to enhance regional integration, facilitate the spread of best practices and shared learning, and allow regionwide initiatives like those described in eLAC2007 to be undertaken. This will help strengthen not just the contribution of Latin America and the Caribbean to the results of the WSIS, but national public policies too.

### **Benchmarking eLAC2007**

In benchmarking the eLAC2007 Regional Action Plan, account needs to be taken of the nature of the plan itself, including consideration of the goals and their associated activities, classified in accordance with their objectives, their orientation or the quantifiable action or results they are meant to achieve. Given these characteristics, benchmarking fulfilment of the action plan involves following up the activities detailed in eLAC2007, distinguished by orientation so that more or less quantifiable activities are identified.

Results-oriented activities are among those that can easily be quantified for benchmarking purposes, whereas action-oriented activities designed to further the development of the information society can be assessed only with difficulty, as can those that translate into the production of studies, projects, the legal establishment of models or trademarks, the creation of organizations, etc. By the very nature of each type of activity, primary data are quantifiable in terms of statistical indicators, whereas others are only susceptible to measurement by conducting an inventory or illustrating the situation that justifies the implementation of an individual policy. Thus, over time, progress in defining and establishing policies whose results can be observed will be made later as they come to be applied.

As an example of a quantifiable results-oriented activity, action 2.1 of eLAC2007 is associated with a target relating to community centres. An example of an action-oriented activity is 24.2, whose associated goal concerns universal access policies.

Thus, the task of establishing indicators and following up an action plan that is also a public policy orientation tool for numerous countries is a difficult but necessary challenge, since it is essential to have feedback from the countries to build up a picture of the progress made towards the goals.

To this end, the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) has been working to benchmark fulfilment of the eLAC2007 Action Plan, with a view to providing information on the progress made in this area by the Latin American and Caribbean countries. To carry out this work, OSILAC is continuously compiling data from different sources, including national statistics offices, administrative records such as those kept by telecommunications regulators and governmental institutions, international agencies and other academic and private sources.

As well as compiling existing information, OSILAC, in its role as a regional forum, is helping national statistics offices to share their thinking about the development of harmonized basic ICT indicators for inclusion in household and business surveys, or in specific surveys dealing with ICTs in the region. Incorporating questions about ICTs into existing questionnaires not only helps to build up a substantial body of data in the countries, but also makes it possible to cross-reference ICT indicators with other socio-economic measurements, as well as situating ICT use among the major development issues. To promote this activity, interested parties in the statistical community meet regularly, as required by goal 26.3 of eLAC2007, for "annual technical seminars, with the participation of national and regional statistical offices".

Where follow-up of eLAC2007 is concerned, OSILAC has so far carried out initial benchmarking of the state of the region's countries in relation to the goals set by the plan, in the document entitled "Where do Latin America

5 PROTIC seeks to provide a solution to the lack of information on ICT projects and professionals while encouraging participation by actors with an interest in these issues. ICA-IDRC, Colnodo and ECLAC project, ver: <http://www.protic.org>.



and the Caribbean Stand in Relation to the eLAC2007 Plan of Action?”<sup>6</sup> A second benchmarking exercise is now being undertaken with a view to revising the action plan in the second half of next year.


## Conclusión

A key underlying aim of eLAC2007 is for international cooperation to be able to show a positive impact on the effort to build the information society in a relatively short period of time in order to ensure that this issue, so crucial to the region’s development, does not drop down the political agenda as the World Summit recedes. To be able to show results, the countries of the region formulated concrete goals and activities and are moving quickly to implement them. The most important thing is for eLAC2007 to foster the creation of strategic alliances between institutions which believe that coordinated and concerted action can achieve greater results than individual action on its own, without the need for supporters of the plan to forgo their own particular interests.

Despite the progress made and the great determination that exists, it should be stressed that the countries of the region are still refining their digital public policy coordination models. They are currently in a learning phase, with different approaches coexisting. Some already have a national coordination agency in place (as in Chile, Colombia and Trinidad and Tobago), whereas others, for different reasons, have not yet managed to put a coherent, inclusive system in place. It is a fact that some initiatives in the region have not achieved their objectives or have yielded only limited results. This should not come as a surprise, however, for once the Internet and digital technologies become a public policy objective, they

face the same problems as all new initiatives. In addition, limited human resources and fledgling institutions, combined with the transversal character of digital issues, are raising unfamiliar challenges for which there are as yet no widely accepted solutions. Success depends on a number of variables such as political capital, legal powers, financial resources and management capacity. The larger and more complex ICT programmes are, the more political will is needed to strengthen these required variables. There is a virtuous circle between the existence of public digital policy and successful implementation. On the other hand, especially in an area that is so new and whose potential benefits, while great, are not easy to pinpoint, there is the danger of descending into a vicious circle of failure and neglect.

In summary, the rapid spread of ICTs and their transversal character have given rise to structural and institutional challenges in the region’s countries which make it essential to have national and international coordination systems for digital development. In the search for the best way of implementing digital policies, an effort of continuous, shared learning would enable the region to reap the ensuing benefits of development, equity and social inclusion.

There is a long way still to travel before the global goals are met in 2015, and the challenges are great. To fulfil the promises made, the region is looking to build up a solid base to facilitate future agreements and multiyear programmes grounded in ever-stronger regional cooperation, and thus to move step by step towards the global goals for the benefit of its citizens. In November of 2007 in El Salvador another step will be reached, with the II Ministerial Conference about the Information Society eLAC2007, to review the advances accomplished and design the path to continue 



<sup>6</sup> See ECLAC (2006) “Where do Latin America and the Caribbean stand in relation to the eLAC2007 Plan of Action?”, [http://www.eclac.cl/socinfo/noticias/documentos de trabajo/3/23113/Where%20do%20Latin%20America%20and%20the%20Caribbean%20Stand%20in%20Relation%20to%20the%20eLAC%202007%20Plan%20of%20Action.PDF](http://www.eclac.cl/socinfo/noticias/documentos%20de%20trabajo/3/23113/Where%20do%20Latin%20America%20and%20the%20Caribbean%20Stand%20in%20Relation%20to%20the%20eLAC%202007%20Plan%20of%20Action.PDF)





# Progress made by eLAC2007 working groups

## <http://www.eLAC2007.info>



### **Goal 5 Working Group: Telework**

Coordinated by: Viviana Díaz,  
representing Argentina

Telework has brought a different way of organizing work, since ICT create a flexibility of time and place that allows workers to carry out their functions from anywhere with ICT access rather than having to be physically present on company premises.

Telework obviously takes place wherever ICT are found, since they allow the location of workers to be separated from that of employers. This practice is found right across Latin America and the Caribbean but is not reflected in current legislation in most of the countries. One of the main characteristics of telework is electronic information processing between the teleworker and the employer via some medium of telecommunication, especially the Internet.

The challenge now is for those countries that have already taken the initiative of introducing a degree of regulation into the contractual relationships involved in telework, and have updated their legislation to reflect these changes, to share their knowledge with other countries for the purposes of orientation and discussion of the risks that need to be forestalled at the regional level as work becomes increasingly internationalized.

To deal with this issue, the working group associated with goal 5 of the eLAC2007 regional action plan has begun a study of legislation and regulations relating to the subject of telework in the region.

This study seeks in the first instance to establish the general characteristics of laws and bills in the countries studied, especially those that have already initiated or drafted specific legislation and collective agreements. The intention is also to study legislation and regulations relating to the telework issue in the region by creating an inventory from a sample of representative countries while at the same time analysing the jurisprudence of each country to highlight the experiences of the different sectors involved.

Proposals are expected to be made as a result of the study with a view to enhancing public policies and harmonizing legislation and

regulations dealing with issues that have a direct or indirect bearing on the practice of telework, examples being working hours, workloads, union representation, in-house staff development, allocation of production resources and expenditure, the globalization of work and pay discrepancies, among others. It is important to recognize that telework is “work” and should be differentiated from home working because it can be carried out not only in the home but also in other places with ICT access or even on the move, i.e., in an indeterminate location.

Traditionally, home working has mainly taken place in the industrial sector, basically in the footwear, textile and apparel industries, using small-scale production techniques. Recently, however, highly skilled, computerized work has been spreading. These two very different activities, with their very dissimilar motivations and demands, are increasingly coexisting: one rooted in the past and persisting in the present, the other looking towards the future and eluding the traditional parameters of a legal category designed for outworn realities.

Shared strategies are indispensable if borderless working is to become a real value for all teleworkers seeking opportunities and for all those countries that are continually seeking to generate new sources of employment. The dean of teleworking, Jack Nilles, used to argue that “the work goes to the worker”, and this is why the different countries need to make every effort to encourage take-up of this system, thereby reducing vehicle use, environmental contamination and fuel consumption 🌐



### **Goal 7 Working Group: Alternative technologies**

Coordinated by: Martha Castellanos,  
representing Colombia

Technological convergence is the phenomenon that characterizes ICT systems. Whereas a few thousand years ago the difference between “smoke signals” and “cave paintings” was obvious, the difference between a television and a telephone seems less and less clear in the Internet era. The ability to codify and process any kind of information and communication using binary code (1 and 0, yes and no, on and off) is so efficient that, in the digital era, it is beginning to crowd out all other ways of presenting information.



The use of new technologies such as next generation networks (NGNs), Internet protocol (IP) related technologies and networks that use broadband to carry a multitude of these codes, often in wireless form (like WiMAX), makes it feasible to think about increasing the coverage of basic connectivity services so that citizens can take advantage of the Information Society and thereby improve the quality of their individual and collective lives, with dynamic methods (protocols like IPv6) being implemented to determine people's location when they use Internet services.

In eLAC2007, policymakers focused particularly on the discussion about adopting the Digital Terrestrial Television (DTT) standard in the region. Sharing experiences and proposals that can ease the transition to DTT is one of the interests of the group. Challenges include working out how this technology can be made affordable for the general population, and finding formulas for fair spectrum use.

Although convergence is solving many of the efficiency problems of information transmission and communication, it is also creating new challenges. Consideration needs to be given to security conditions in telecommunications networks, as these are a guarantee of civic rights such as the right to privacy, and to the security of online transactions.

Given the speed of the ICT innovation cycle and the ruthlessness of the Schumpeterian creative destruction taking place in these systems, this group will have its work cut out, and will require a great deal of analytical capacity, if it is to ensure that the region is aware of the wide range of technological solutions available (and of the advantages and disadvantages of each), including technology appropriation strategies, which require work on several fronts: academic researchers, owing to their awareness of the latest developments; strategic alliances built on efficient planning; identification of the characteristics of the target market and users; full use of installed capacity; the acquisition of technology appropriation mechanisms; and the consistent, progressive allocation of resources to R&D.

In the case of DTT, the economies of scale that would be generated in the region if one standard became more popular than others would have a great impact on the continent's economy. Given that the characteristics and needs of each country are different, however, as are the policy goals to be achieved by implementing digital television, each country is looking for the standard that best meets the majority of its expectations. The countries pioneering this movement thus have to be seen more as an interesting subject for analysis than as trendsetters.

The governments of the region need to examine the advantages and disadvantages of adopting each of the standards in the light of the technical conditions of current networks, the cost to operators of implementing them, developments in productions for digital media, terminal manufacturers,

efficient management of the radio spectrum and, most importantly, the socio-economic impact on the population. This needs to be supplemented by clear policy objectives, which come into play when the needs to be met by the digital television standard chosen are identified, i.e., once it has been decided whether better quality and high resolution are what is being sought, or whether there is an additional need for interactive television capable of carrying applications and content that can promote education, the transmission of information, and entertainment.

Thus, interactive television would speed up technological convergence, with a single network being used to provide a number of telecommunication services. Given high-quality content, this would create a propitious environment for the region to narrow its digital divide and usher in the information society 🌐



### Goal 8 Working Group: Software

Coordinated by: Sergio Rosa,  
representing Brazil

Goal 8 of eLAC2007 talks of exchanging experiences and criteria used for the development and use of software and promoting and stimulating the development of the software industry.

The software sector is not only growing strongly, but is the basis of any innovation system. The innovation record of a wide range of industrial sectors and services has relied on the development of creative softwarebased applications to turn ICTs to account in new ways. Thus, economic development requires these internationally available technologies, which are absorbed and adapted to specific needs.

Current trends in technology are opening up new opportunities for countries that have qualified human resources, suitable infrastructure and the business skills to compete globally. The rapid spread of broadband Internet has been creating new location opportunities for software and services production by doing away with many traditional location advantages. The advent of offshoring in particular has been opening up new opportunities for the export of ICT-based services. From a social point of view, ICTs are powerful instruments of inclusion, via new educational methodologies, inter-institutional cooperation and improved public services and face of rapid technological, institutional



and regulatory change, little is known about the economic factors shaping the participation of Latin America and the Caribbean in the software industry.

The goal 8 working group will concentrate its efforts in working lines such as economic development and production of software, formation of intelligence and capacities in software creation, use of software in public administrations and free software, centering the discussion in issues like access and free software, and experiences related to implementation of technological solutions in countries of the region 🌐



### **Goal 10 Working Group: Research and education networks**

Coordinated by: **Ida Holz,**  
representing **Uruguay**

In 2002, the European Commission invited the directors of academic networks in Latin America to a meeting in Toledo to propose the creation of a cooperation project to set up an “advanced network in Latin America” financed partly by the EU and partly by the countries of the region. The meeting was organized as part of the Connecting All European and South American Researchers (CAESAR) Project financed by the Information Society Technologies (IST) programme of the Information Society and Media Directorate-General of the European Commission.

This was the beginning of the CLARA (Latin American Cooperation of Advanced Networks) civil partnership, since the countries attending the meeting then proceeded to draft and sign a document promising cooperation between them. It might well be said that the representatives of the main Latin American academic networks were given the opportunity to accomplish their old dream of “at last creating a Latin American network, after so many failed attempts”.

The studies for this project led to the Latin America Interconnected with Europe (ALICE) Project and the creation of the CLARA network.

The CLARA initiative has a number of aspects, among them:

- (a) the creation of infrastructure to integrate the advanced networks of Latin America,
- (b) the development of academic projects and cooperation between the countries of the region and Europe.

This led to the creation of a non-governmental organization to represent the interests of this network of organizations.

The CLARA network was connected to the European advanced network (GÉANT) thanks to the ALICE project. The European Commission signed a contract for 10 million euros with DANTE, the organization in charge of GÉANT, to execute the ALICE project, and this provided the basis for the creation of the Latin American network and its connection with Europe.

This sum represented 80% of the financing needed to build and operate the CLARA network until the end of March 2007. The other 20% was provided by the Latin American partners. After this period, the countries participating in CLARA will be responsible for the sustainability of the initiative and the connection to Europe and other regions.

The CLARA network is installed in 13 Latin American countries. Some key objectives at present are:

- (a) To obtain financing to replace the European Commission contribution in 2007 and be able to maintain the Network in subsequent years.
- (b) To study the feasibility of fully extending the network to unconnected countries (Paraguay, Bolivia, Costa Rica, Honduras, Cuba) and the particular situation of Argentina. This will not be possible without special financing, however, as CLARA does not have the capital to cover the 80% hitherto financed by the European Commission.
- (c) To increase the number of shared international academic and research projects in the region.
- (d) To study the possibility of extending the CLARA network to the Caribbean countries and the conditions of inclusion. The countries of the region emphasized the importance of including the Caribbean in goal 10.1 of eLAC2007 🌐



### **Goal 13 Working Group: Creative and content industries**

Coordinated by: **Pilar Montarce,**  
representing **Argentina**

The production, distribution and consumption of digital goods and services is quickly gaining ground as a share of economic activity, as well as in the sociocultural sphere. This reflects the impact of “convergence” between the communication, information and computer industries,




a process that is leading to “networked” production, distribution and consumption of these goods and services on “real-time” digital platforms. “Networked” operation gives rise to different types of direct interdependence among actors in the creative industries and to processes unthought-of in the world of the conventional economy. Some have argued that the digital era allows everybody to be a producer of cultural and creative goods. Internet video and digital photo sites (You Tube) and blogs are evidence of this. Others argue that infinite economies of scale and the high costs of producing sophisticated digital material (films with special effects, for example) are responsible for production being concentrated, as it clearly is, in the hands of a few transnational companies.

New questions are arising about ownership rights over products created on interconnected and interoperable platforms and with the institutional and regulatory frameworks that each country decides to adopt to govern these markets. These are not “conventional” markets in the general sense of the word. They are productive activities that require a particular model of governance to ensure an optimum social allocation of resources and equitable forms of access to the products they generate for sections of the community that are currently excluded from these markets. The complex morphology and behaviour of these industries mean that conventional market rules cannot be relied upon to provide an effective enough instrument to achieve situations close to the social optimum, either in production or in access.

With the core objective of researching the development and challenges of the creative and content-development industries, this working group has set out to find solutions to problems such as the financing of an intangible goods economy, distribution of the region’s cultural goods and services, communication, and the need to improve local production capacity for content reflecting the region’s cultural identity and diversity.

Among the issues to be addressed, the group has given the highest priority to the creation of the Latin American Observatory on Content Industries (Observatorio Latinoamericano de Industrias de Contenidos), which would enable existing information on the subject in the region to be organized and completed by adding information on digital content, with potential lines of action including the establishment of standards for Latin American indicators on content industries, the publication of statistics on cultural goods and services trends, demand and consumption, and the generation of promotional projects with cultural and regional content to strengthen local identities.

This exercise needs to pay attention to issues like financing sources for the generation of cultural content and preservation of the digital cultural heritage. It is important to focus on attempts that have been made to preserve digitally published material since, to a gradually increasing extent, many information resources that are potential sources of cultural

heritage are being generated digitally and may be affected by technical obsolescence and physical deterioration. This being so, the group hopes to identify tools that can help to preserve the digital heritage and then submit proposals to governments for a set of best practices that can be applied 



## Goal 15 Working Group: Electronic government

Coordinated by: Guillermo Jakoby,  
representing Nicaragua

As goal 15 of eLAC2007 points out, the Electronic government working group relies heavily on the pioneering work being done by the Red GEALC platform since 2003.

One long-standing issue on the e-government agenda is the construction of an analytical framework to track progress in the introduction of e-government in Latin American and Caribbean countries. A variety of efforts are now being made to develop a historical analysis of the processes that have resulted in a particular level of e-government in each case by identifying organizational processes and changes, the actors involved, the problems faced and the lessons learned. At the same time, an analytical framework needs to try to identify critical success factors in the adoption of e-government in the region, while also being designed to allow for comparisons with other regions that take in specific aspects such as democratic performance, universal access, the structure of public administration and accountability, identifying best practices with a view to analysing their possible application in the region.

Another aim is to identify the ways in which the institutions and organization of the State are being transformed by the introduction of ICTs, with a view to establishing how these underpin and enhance efficiency, accountability, transparency and democratic performance. The approach taken to State reform and modernization and the New Public Administration are influenced directly by the use of ICTs. The architecture of e-government needs to bring together processes, information and data, applications and technology infrastructure into a single whole as it seeks to establish levels of coordination with institutions and citizens.

In addition, a comparative analysis of electronic procurement systems has been undertaken with a view to identifying legal, institutional and technical transformations and thence formulating a proposal for an international parameter to be adopted in the region, including an evaluation of the costs and benefits of the desired interoperability. This research sets out to illustrate the



technical and legal processes involved in introducing a public procurement system in order to identify the general minimum characteristics needed for efficiency and transparency. The construction of a system of indicators for such systems in Latin America is also proposed.

Last but not least, goal 15.2 of eLAC2007 calls for the elaboration of “an agenda of priorities for the implementation of interoperability standards for e-government services”. The governments of Brazil and Colombia offered to lead this complex effort. The group is giving priority to a proposed study showing the viability, importance and priorities of interoperability between e-government services 🌐



### **Goal 23 Working Group: Financing**

Coordinated by: Olga Cavalli,  
representing Argentina

How to finance the construction and maintenance of the information society in developing countries was one of the most hotly debated issues throughout the WSIS process. Despite all the development benefits produced by the digitalization of information and communication in social and productive organization processes, it became clear that technology was not only a cause of development, but also a consequence of it. The technological base needed to move into the digital era is expensive and requires resources not only to make the paradigm leap, but also to stay on top of this new evolutionary wave in human development.

Aware of how little was achieved at the global level during the Summit, those responsible for public policies in Latin America and the Caribbean decided to launch internal research within the region to begin analysing this tremendous challenge. The digital divide is still there, and since external aid was not as abundant as had been hoped, goal 23 of eLAC2007 includes activities such as “optimizing the use of financial resources and instruments” and “mobilizing more resources”.

In accordance with goal 23.1 of eLAC2007, the Financing working group began by evaluating “national and regional needs for financing ICT development” in the region. A wide-ranging survey of ICT financing priorities in the region was conducted, and this was very successful, involving 346 experts from most of the region’s countries. The results of the survey will be one of the inputs for the next steps in the Financing working group work plan. On the basis of these results and a review of existing financing instruments in the region’s countries, there will be a report and study on

ways of optimizing the use of these financing sources and suggestions for other possible sources of finance for ICT projects in the Latin America and Caribbean region. One valuable result of the survey is to have revealed the priority placed by the region on issues like school education, the creation, maintenance and improvement of infrastructure, and capacity-building.

To continue progressing, the group is considering building on the survey results by gathering data on the ICT component of public policy financing in the region, focusing on three important sectors: health, government and education.

This research would identify financing sources and destinations. The method proposed is to ascertain the opinions of people involved with policy decision-making in the relevant agencies to determine the impact and effectiveness of financing. Another aim is to produce a diagnosis of shortcomings in these areas, considering needs in terms of amount, diversification of sources, modes of operation and diversification of destinations. A set of suggestions would be formulated in the light of the results obtained.

Emphasis should be laid on participation in the survey not only by State officials but also by civil society, academia and the private sector, confirming the multi-stakeholder approach of the eLAC2007 plan of action 🌐



### **Goal 25 Working Group: Legislative framework**

Coordinated by: Erick Iriarte,  
representing Peru

*“If our cultural diversity is our greatest wealth, regulation affecting information society issues needs to be understood as a way of creating frameworks for harmonized standards that reflect this diversity and allow us to forestall the creation of regulatory vacuums”.*

Regulatory Minimum Points, Alfa-Redi.

The development of harmonious policies involving diverse human groups is a complex process at the best of times; if these policies involve whole countries, it becomes more complex still.

The Legislative framework working group is a regional policy initiative whose objective is the creation of instruments to harmonize regional standards, so that the different regulatory regimes which have emerged at the local level can be integrated into a reference mechanism which allows them to develop appropriately. This is obviously a complex task, but none



the less important for that; of all the different tasks in the eLAC2007 Regional Plan of Action, it is this one that, because of its transversal nature, has the clearest impact on the future development of other policies.

The efforts of the Latin American and Caribbean countries to develop instruments for harmonizing information society-related standards have been made with a clear understanding of the social phenomenon we face and the legal challenges involved, since the cross-border characteristics of ICT use mean that questions of jurisdiction and applicable legislation are critical. Resolute efforts have to be made to ensure that the development of the information society and the struggle against the excesses and abuses for which ICT are sometimes employed are not held back because there is a regulatory vacuum or a lack of legal harmonization.


A key priority for the development of regional policies is for consideration to be given in structural terms to the implementation of legal harmonization instruments that can reconcile existing efforts, provide a regulatory core for countries where the standards concerned have yet to be developed, or stimulate improvements to existing laws in the region.

As a matter of priority, this working group has undertaken a study on the regulation of data and privacy protection and on cybercrime and ICT crime. Issues such as digital or electronic signatures and electronic procurement have been left for the next phase of the group's work.

The purpose of the study is to determine the current state of affairs, the local and regional actors involved and the efforts already made, to pool experiences, and to draw up proposals for harmonizing standards throughout Latin America and the Caribbean.

Another aim is to draw up a proposal for legal harmonization in relation to data and privacy protection, proposals for data protection policies, and a document containing agreed legal definitions of cybercrime and ICT crime, as well as other regulatory proposals.

The group is now engaged in determining the consultancy work required for this issue, and the first report on the characteristics of existing documentation and coordination of tie-ins with existing regional measures has been submitted. The working group is also awaiting the feedback required from the countries in relation to the original proposals, which are essential for work to proceed.

The efforts of the Legislative framework working group are not taking place in isolation, but are intended to be integrated with other initiatives already deployed. It does, however, have a clear mission, which is to create legal harmonization instruments to further the development of an inclusive, participatory and democratic information society for all the citizens of Latin America and the Caribbean 

## Core Indicators to measure ICT for Development


The UN Statistical Commission has expressed a clear consensus to support the core list of indicators presented by the Partnership on Measuring ICT for Development, endorsing that countries adopt this core indicators.

At the 38th session of this Commission held in New York, from 27 February to 2 March 2007, attending more than 130 countries represented by their National Statistical Offices and many international organizations, UNCTAD on behalf of the Partnership presented the report with an overwhelming support for the work and broad consensus to endorse this core list of indicators that becomes another step forward in the measurement of ICT impact in development.

The core list for measurement of ICT for development consists of four sets of indicators: basic indicators on ICT access; indicators on ICT access

and use in households; indicators on ICT use in enterprises; and indicators on the ICT sector and trade in ICT goods. These indicators are based on internationally agreed standards (especially those developed by ITU, OECD and Eurostat). As a complement to the list, there is a document which provides definitions for each indicator as well as methodological notes.

In Latin America and the Caribbean who speaks with National Statistical Offices in this arena is OSILAC, an ECLAC initiative with support of ICA-IDRC and @LIS of European Union.

The Partnership on Measuring ICT for Development includes ITU, UNCTAD, UNESCO Institute for Statistics, four UN Regional Commissions (ECA, ECLAC, ESCAP, and ESCWA), OECD, the World Bank and the UN ICT Task Force 



# Lack of information about the Information Society in LAC and solutions under development

Given the importance of measuring Information and Communication Technologies (ICT) and having a set of measurements that are comparable between countries and can be used to evaluate the state of progress of and within each, the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) is seeking to contribute to the establishment of a common frame of reference for measurement. To accomplish this, OSILAC is focusing on the collection of data, indicators, methodologies and qualitative information on ICT from all over the region; the standardization and harmonization of ICT statistics compiled at the subregional, national and local level, to which end it is working for the creation of harmonized methodological frameworks; and improvements in the quantity and quality of the ICT data gathered across the region, for which it is providing training to technical staff at national statistical offices and other data gathering institutions.

To cope with the challenge of harmonizing measurement, the National Statistical Offices of the region embarked three years ago upon an intensive working agenda. They have been working jointly with OSILAC and the Partnership on Measuring ICT for Development, within the framework of activities of the ECLAC Statistical Conference of the Americas (SCA). Thanks to these joint efforts, the countries of the region have managed to make progress with the collection of statistics, not only on access to ICT goods and services (television, fixed-line and mobile telephony, computers, the Internet), but also on usage, especially of mobile telephones and the Internet (see chart).

At the Third Workshop on Information Society Measurement in Latin America and the Caribbean, held in Panama city from 22 to 24 November 2006, the countries decided on the following agenda:

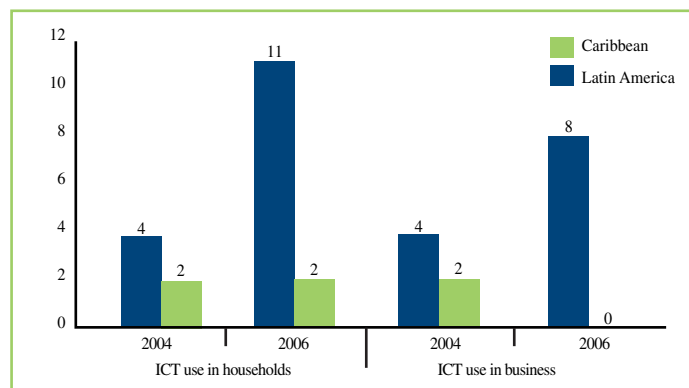
- (i) Construction of a regional database including statistics produced by national statistical offices (NSOs) and other agencies responsible for measuring ICTs in the region. This database will be presented to the Statistical Conference of the Americas (SCA) in July 2007.
- (ii) The Observatory for the Information Society in Latin America and the Caribbean (OSILAC), together with the Partnership on Measuring ICT for Development, will assist countries through capacity-building (technical assistance) and the search for financial resources to implement the proposed list of indicators on ICT access and usage.
- (iii) For all activities, and with the objective of regional collaboration for the development of harmonized ICT indicators, OSILAC will work closely with the ICT statistics harmonization working group of the ECLAC Statistical Conference of the Americas (SCA).
- (iv) Presentation of the globally agreed list of core ICT indicators at the thirty-eighth session of the United Nations Statistical Commission,

27 February to 2 March 2007, for endorsement.

- (v) Presentation of the “Compendium of Practices on the implementation of ICT questions in household and businesses surveys in Latin America and the Caribbean. With inputs from other sectors”, together with the list of core ICT indicators, to the SCA for endorsement at its July 2007 meeting.

This last point concerning the Compendium of Practices is of special interest since it is making it possible to move on from the “which are the core indicators for measuring ICT?” approach to the more advanced stage of “how are these indicators to be compiled?”. Since the development of ICT indicators is a work in progress, implementation of ICT questions is a learning process both for survey planners and implementers and for respondents and subsequent users of the information. The experience being built up by the countries is a source of information for reviewing measurement proposals and, most importantly, provides a basis for countries that have not yet started to measure ICTs and need organized information to help them incorporate the agreed questions into their surveys. It is hoped that the Compendium of Practices will draw this experience together and facilitate the process of measuring ICT access and usage (see: <http://www.cepal.org/socinfo/osilac/>)

## Advance of the statistical implementation on ICT use in the countries of the region (2004-2006)



Source: OSILAC

1 OSILAC is a joint initiative of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and the Institute for Connectivity in the Americas (ICA) of the International Development Research Centre of Canada (IDRC), with support from the European Commission @LIS programme.

2 This Partnership was launched in June 2004 and comprises four United Nations regional commissions (ECLAC, ECA, ESCAP, ESCWA), the ITU, the OECD, UNCTAD, the UNESCO Institute for Statistics, Eurostat and the World Bank. The work of this group consists in defining and collecting a common set of ICT indicators and in helping developing countries in their efforts to produce statistics on the information society, thereby helping to close the information gap between developed and developing countries (<http://measuring-ict.unctad.org>).


3 <http://www.cepal.org/socinfo/noticias/documentosdetrabajo/6/23116/Partnership%20core%20%20indicators%20English.pdf>



# Caribbean ICT Policy Makers Seminar

The Government of Barbados, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and its Subregional Headquarters for the Caribbean, with financial support from the United Nations ICT Task Force and with the collaboration of the CARICOM Secretariat, convened a seminar for senior technical officers in the public sector responsible for planning and/or monitoring the implementation of national ICT strategies. Participants were from the public sector and are in charge of drafting, implementing or otherwise influencing the content of national information and communications technology policies and strategies. The objectives of the Seminar were to promote the formulation of inclusive public ICT policies and examine the linkages between ICT strategies and national development strategies; discuss policy implementation issues and highlight selected successful

public-sector ICT initiatives in the region, sharing experiences and lessons learned; review the findings of the recently completed ECLAC study on the Caribbean information society; and identify strategic priorities for Caribbean countries in the context of eLAC2007 and the WSIS Plan of Action.

Expected outcomes: improved policymaking capacity in the area of Information and Communications Technology for Development; repositioning of ICT strategic planning within the framework of national development planning; increased understanding of the context for which ICT policies are being developed; better understanding of which ICT strategies have worked in the region and why; identification of the next steps for Caribbean countries vis-à-vis the WSIS Plan of Action and eLAC2007 

## ECLAC and the European Commission adopt a Memorandum of Understanding to strengthen cooperation on regional economic and social development


The Economic Commission for Latin America and the Caribbean (ECLAC) and the European Commission, the executive organ of the European Union, have signed a Memorandum of Understanding to strengthen cooperation on different matters relating to the economic and social development of the region.

The agreement was signed by José Luis Machinea, ECLAC Executive Secretary, and Benita Ferrero-Waldner, European Commissioner for External Relations. Present at the ceremony were United Nations officials from ECLAC and high-ranking officials from the External Relations Directorate-General of the European Commission. The parties agreed to enhance ties in three specific areas: social cohesion and poverty reduction, regional integration, and macroeconomic convergence and statistics.

In the regional integration and macroeconomic convergence area, explicit mention is made of political and regulatory dialogue about the information society: "...Harmonization of regional regulations, including policies and regulatory dialogue dealing with the information society

(taking in subjects such as investment, infrastructure, transport and labour), with activities designed to help countries develop policies, capacities and approaches through appropriate and timely initiatives. Scientific and socio-economic research of importance for LAC governments and regional bodies to assess and formulate social, economic and regional integration policies."

The Memorandum also singles out social cohesion as a key focus for enhanced cooperation between Latin America and the Caribbean and the EU, in accordance with the Lisbon Declaration (declaration of the IV EU-LAC Ministerial Forum on the Information Society: "An Alliance for Social Cohesion through Digital Inclusion").

Lastly, it emphasizes the importance of statistical cooperation, an area being worked on by OSILAC and Eurostat: "...Cooperation in the area of statistics will aim at promoting coordination between the two parties in their respective fields of competence, particularly in relation to the priority issues set out in this Memorandum" 





# Interoperability and e-government

Electronic government is the latest approach adopted by public administrations to modernize the State and to solve problems of inclusion, inefficiency and lack of transparency. The countries of Latin America and the Caribbean now implementing projects that use e-government to modernize their public administrations need to look for the most efficient way of sharing data between their information systems at the regional level. The countries need to agree on standards for information sharing and policies to regulate it, and to establish technological platforms that can guarantee security of information and efficient investment of public resources.

All of the countries now need to contribute to the effort to improve information sharing conditions so that they do not continue to develop IT solutions that take account only of their own particular needs, giving rise to what are now known as “IT islands” characterized by inefficient, uncoordinated information handling. For this reason, when governments decide to establish an electronic one-stop shop so that citizens can carry out all their transactions with government online, they first need to solve problems of:

- Information heterogeneity and duplication
- Incomplete information
- Lack of clarity concerning responsibility for information
- Unavailability of information when needed, making it impossible to share information online
- Differences in the concepts used for information sharing, leading to inconsistencies in results.


The way to solve these problems in each country is to adopt common standards for public administration and to establish an information sharing platform that lowers the costs of the interaction needed both within and, in more complex cases, between countries.

To address these challenges, the Second Red GEALC Thematic Workshop was held in Bogotá, Colombia as part of the regional public goods programme of the Inter-American Development Bank, centring on the subject of “Interoperability and Governmental Intranet” (8 to 10 November). Work is being oriented by goals 15.1 and 15.2 of the eLAC2007 Plan of Action, whereby the countries of the region seek to “create and/or strengthen instruments for exchanging e-government services, such as the e-Government Network of Latin America and the Caribbean (Red GEALC)” and “form a working group to elaborate an agenda of priorities for the implementation of interoperability standards for e-government services”.

Over three days, those responsible for designing and implementing efficient and effective public information management models in different countries of the region met for the purpose of producing a thematic guidance document, which will include general aspects and case highlights.

One of the main results of the workshop was the effort by the Governments of Colombia and Brazil to press ahead with an ambitious agenda to lay the groundwork for interoperability in their e-government services. One of the main components of the Colombian online government architecture is the implementation of technological solutions to interconnect and integrate the public administration and enable citizens and businesses to access online government content, applications and information systems. Brazil has also developed a platform, known as ePing. These are regarded as the two examples of best practice in the region. To set regional interoperability in train, an eLAC2007 e-government interoperability working group was formed, and this will work under the coordination of the OAS Red GEALC network and ECLAC. Hernán Moreno, an ECLAC expert, has proposed the following actions for the interoperability working group:

1. Prepare the WHITE BOOK on e-government interoperability for Latin America and the Caribbean
2. Establish the minimum requirements for service-oriented architecture (SOA), considering the telecommunications, security and government services characteristics of Latin America and the Caribbean
3. Use XML to start defining the language of online public information for Latin America and the Caribbean (IPELALC)
4. Identify and prioritize regional interoperability needs by strategic sector
5. Develop the capabilities required for the countries of Latin America and the Caribbean to take part in the international forums where standards are defined: XML, XBRL, UBL, ISO
6. Seek funding from multilateral cooperation and financing agencies for projects to define, disseminate and adopt interoperability in Latin America and the Caribbean
7. Create an open library of interoperability for Latin America and the Caribbean.

The workshop was attended by participants from Barbados, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Nicaragua, Paraguay and Trinidad and Tobago. It was hosted by the Colombian Connectivity Agenda and jointly organized by the IDB, ICA, ECLAC and OAS 



# How do ICT impact the economy?

Over the last two decades, there has been an intense and far-reaching debate about Information and Communication Technologies (ICT) and their impact on productivity. Discussion centred originally on the so-called “productivity paradox” identified by Robert Solow in the 1980s, and then on the hyperbole of the “new economy” in the late 1990s.

The notion of a “productivity paradox” arose when it was confirmed that productivity growth in the United States had slowed since 1973, just when computers were beginning to spread. By 1987, when their use was becoming widespread, Robert Solow was able to summarize their effects in a famous phrase: “You can see the computer age everywhere but in the productivity statistics”. This was followed by a heated debate on the effects of ICT use and production on growth and productivity. It seemed reasonable to think that ICT would reduce companies’ production and transaction costs by helping to enhance the transparency, dynamism and efficiency of markets. There was little empirical evidence to back this up, however.

Some said that the “productivity paradox” was explained by measurement failures. ICT can increase the quality of products and services, and even improve the functioning of productive systems, without the effects being directly observable in traditional productivity statistics. These statistics would not properly capture increases in ICT investment, for example, because they take no account of the higher quality of new equipment. Another interpretation of the paradox, presented by studies like those of Oliner and Sichel, was that even in the United States, computers represented just a small fraction of total capital in the early 1990s. Others argued that ICT would take time to produce their impact, as had happened with other crucial inventions in the past, such as electricity, which made their effects felt only after a delay. The idea is that it takes a number of years for information technologies to spread in the economy, for users to be trained to employ them properly, and for the network effects required to integrate them into the production process to build up. Only when the introduction of ICT is combined with appropriate changes in the management and organization of production in companies (investment in human capital and in research and development, more flexible labour relations, etc.) will the conditions for higher productivity be in place.

The discussion about the “productivity paradox” was helpful in that it introduced additional factors into the analysis of the economic impact

of ICT and provided a deeper understanding of the phenomenon. At least in the United States, however, it has been becoming less relevant over the last decade. Since the mid-1990s, studies show that ICT have generated significant improvements in the productivity of firms and the economy generally. Moreover, it is now fairly well-established that the contribution of ICT to economic growth comes through three channels. First, efficiency gains at firms producing ICT goods and services have a direct impact on the overall productivity of the economy, or total factor productivity (TFP). Second, declining ICT prices prompt greater investment in this equipment and this, added to the existing stock, generates increases in worker productivity. Lastly, the organizational changes accompanying the introduction of ICT, which are seen as general purpose technologies, mean that these investments generate higher TFP growth, an effect that is observed after a time lapse.

Once the productivity paradox in the United States economy had seemingly disappeared, people began to talk of the advent of a “New Economy”. This was a way of saying that the beneficial macroeconomic impact of ICT was not just a temporary, short-lived phenomenon. In other words, it was not an economic bubble but a lasting step-change. On the basis of this assumption, different hypotheses were advanced about the different routes whereby ICT might impact growth. For some, the miracle was explained not only by the recovery of manufacturing productivity since 1995, but also by the investment boom in these new technologies. This camp includes authors like Jorgenson and Stiroh, who argued that the new economy reflected not only the effects of greater efficiency among ICT producers, but also the spillovers in other sectors and strong investment in new technologies throughout the economy. Gordon, on the other hand, argued for the view that the producing industries were mainly responsible for the productivity rise in the United States.

What is relevant about this debate is the light it sheds on possible courses of action in the public policy field. From this point of view, what needs to be established is whether it is ICT production, use, or both combined that really matters for growth in developing countries. Looking at the experience of the European countries, labour productivity has in most cases lagged far behind that of the United States. According to Timmer and van Ark (2005), this is due both to lower investment in ICT goods and to the more modest contribution to overall productivity of the companies producing these goods.




There are some differences in individual performance, however. Ireland stands out for the high contribution of the ICT goods-producing sector to TFP (66%), since that country is used by foreign companies as a platform for exports to the rest of Europe. Nevertheless, ICT investment was only 1.9% of the total in 2001. Sweden and Finland, by contrast, have high levels of ICT investment (4.7% and 4.3% respectively), and this, together with a well-developed producing sector, helps explain the good performance of labour productivity in recent years. In the rest of the EU, however, the contribution of ICT, whether in the form of use or of production, has been much smaller. This is particularly true of small countries such as Austria, the Netherlands, Greece and Spain, where ICT investment represented less than 3% of GDP in 2001 and the contribution of the producing sector to TFP was low in comparison with that of other sectors.

In the absence of a uniform pattern of performance, it can be inferred that the effects of an intensive ICT-producing or using sector will largely depend on the environment in which companies operate. More specifically, if a significant impact is to be made, it is important for there to be proactive public policies, efficient regulatory frameworks and institutions, human capital formation, investment in research and development, etc. At the same time, ICT on their own cannot change the structural conditions affecting countries' growth, although they can help economies to take off.

In Latin America, this debate has not even begun. The relationship between ICT, productivity and growth has barely been discussed. Limitations at the analytical level are compounded by practical problems such as the shortage and poor quality of ICT statistics. Given this situation, ECLAC has decided to address the challenge by undertaking studies to measure the impact of ICT at the regional level. Although these technologies have spread quickly here as well, account will need to be taken of other peculiarities that influence their impact on growth. Firstly, most of the countries are essentially users and importers of ICT. Production and export of goods are limited to Costa Rica (where there is an Intel plant), Brazil, Mexico (maquila) and Argentina. Services are somewhat more widespread in the form of telecommunications and software. Secondly, it is necessary to consider how these technologies can be taken advantage of in a context of unequal income distribution, productive heterogeneity and institutional weakness.

In the light of these considerations, the subject is being addressed by means of a project initiated by the ECLAC Information Society Programme, using three different approaches. The first uses the growth accounting framework to quantify the impact of ICT via capital accumulation, following a methodology developed by Dale Jorgenson (University of Harvard), Paul Schreyer (OECD) and Bart van Ark (GGDC), among others. One of the challenges here is the need to produce hardware, software and telecommunications investment series deflated by hedonic price indices that reflect improvements in the quality of these technologies. The second approach is to carry out a number of econometric studies to estimate, firstly, the elasticity of per capita output in relation to telecommunications infrastructure (measured by the penetration of fixed and mobile telephones) and, secondly, the impact that regulatory institutions and policies have had on the spread of ICT in Latin America. These first two approaches are based on the neoclassical framework, which offers certain advantages in empirical and modelling terms. Also being followed, however, is a third, heterodox approach which sets out from a critical assessment of the conventional treatment given to economic growth in the two previous approaches. Working within the "structural-evolutionist" tradition, the researchers are estimating a model in which the ultimate effect of ICT on growth depends on a country's ability to create and spread knowledge, and thus take advantage of these technologies. In all three approaches, the close collaboration with european experts is ensuring international compability.

As the ECLAC growth, productivity and ICT project proceeds, Latin America will be able to join in the debate that has opened in the developed world about the impact of ICT production and use on aggregate economic indicators. This also accords with goal 26.2 of eLAC2007, in which the countries of the region call explicitly for the elaboration of "comparative studies on the economic and social impact of ICT". The hope is that the diversity of theoretical and methodological perspectives will give decision makers and public policymakers a broader vision, while at the same time opening up a fruitful dialogue with studies carried out for developed countries. The next step will be an experts workshop on the issue, it will be hosted in ECLAC's headquarters, on march 2007, and will review different methodological approaches 

# Which are the most important issues in eLAC2007?

At first sight, thinking about public policies and ICTs might seem very challenging: designing, creating and implementing successful public policies takes years, if not decades, while the nature of ICTs and the concomitant socio-economic change can alter completely in a matter of weeks. If an eLAC Action Plan had been designed in the 1980s, its focus would probably have been on stand-alone computers, artificial intelligence and hardware production, since these seemed to hold out all the promise for the future, and almost nobody would have foreseen the power that would be unleashed in the 1990s by interconnecting these isolated systems. A simple link and a system for hyperlinking information turned the entire ICT agenda upside down in a few years and the Internet took over. During the 1990s, an eLAC agenda would have been dominated by fixed-line and public telephony, while the power of wireless and alternative services such as voice/data traffic would not have been regarded as decisive. Short-term trends and hype are still setting the agenda today. However, developing countries lack the resources to ride every wave of excitement and have to evaluate the complex and dynamic forces of Schumpeter's creative destruction with care.

While both the Action Plan of the World Summit on the Information Society and the Millennium Development Goals set ambitious objectives for 2015, peering a decade into the digital future and trying to imagine the ICT environment then may seem like science-fiction to many. However, ignoring future developments and always running to catch up is an even less attractive option for public policy.

Considering this, ministers and heads of delegation from Latin American, Caribbean and European Union countries present at the IV European Union (EU) - Latin America and the Caribbean (LAC) Ministerial Forum on the Information Society, held on 28 and 29 April 2006 in Lisbon, Portugal, agreed on the following point in the Lisbon Declaration: "10. We express our willingness to intensify our dialogue on the development of foresight studies, aiming at the creation of future common visions for the development of the Information Society, involving the public sector, civil society, academia, private sector and users of both regions."

On the basis of this aspiration, ECLAC has initiated the eLAC foresight exercise, an active policy instrument to provide decision makers and public opinion with insights into future information society developments in Latin America and the Caribbean (LAC). This neither aims at predicting the future nor at providing plausible predictions of future technological developments, nor at anticipating the future societal impacts of technologies.

Rather, eLAC Foresight aims to raise awareness, promote dialogue and assist strategic policy analysis here and now with a view to enhancing the general understanding of the processes reshaping society and the economy, institutions and policy priorities, in the light of hypothetical projections for widespread development and application of ever-changing ICT in Latin America and the Caribbean.

The exercise has the backing of an extensive multi-stakeholder group. Since nobody in the region owns a reliable crystal ball, it is important to include the opinions of the broadest possible group of stakeholders, and this means securing the active participation of academia, civil society, the private sector and public institutions. The objective is to create a common vision of the future for the development of Latin America and the Caribbean on the basis of the eLAC2007 Regional Plan of Action and to identify interest groups and structures of public concern among the eLAC stakeholder community in order to support the eventual elaboration of new regional policy options on a transparent and democratic basis once eLAC2007 has been completed.

The exercise sets out from the current short-term policy priorities for the region as specified in the eLAC2007 Regional Plan of Action for the Information Society. In 30 goals encompassing 70 actions, the region not only expresses its major shared concerns and projects, but also identifies the most urgent challenges. The region's policymakers wisely decided not to choose the omnipresent year 2015 as the date for delivery, but opted for a three-year frame of reference (2005-2007) in recognition of the short lead times of ICT development. Thus, eLAC2007 may be regarded as a first and intermediate step towards 2015. Accordingly, policymakers might think about a further intermediate step for the years between 2007 and 2015.

To provide input for these considerations, the eLAC foresight exercise has started a discussion process in the form of a Policy Delphi, which is designed as an open opinion survey in four rounds. The first two aim at evaluating policy goals and the latter two at evaluating policy options. Each of the later rounds presents the results of the previous round as feedback, the objective being to generate the strongest possible opposing views on the potential resolutions of policy issues.

The first round was carried out from mid-April to mid-June. A questionnaire was posted at the eLAC2007 portal, and 155 experts from 16 countries in the region evaluated the thematic policy areas of the eLAC2007 Action Plan for their potential impact on economic development, social development and political development in Latin America and the Caribbean by 2010. The following table shows the ranking of priorities among all participants and the three parameters.



## eLAC ranking derived from publicDelphi survey, june 2006

1. Policies for universal ICT access
2. ICT training for public officials, including those working at schools and health centres
3. National information society strategies and agendas
4. e-government
5. Financial resources for ICTs
6. ICT training for workforce
7. Establishment of an appropriate legislative framework
8. Financial instruments for ICTs
9. ICT connectivity in local governments
10. Public information provision using ICTs
11. Regional ICT infrastructure and interconnection of networks
12. ICT impact studies
13. Advanced ICT-based networks for research and education
14. ICT training for micro-, small and medium-sized enterprises
15. ICT connectivity in schools
16. e-education
17. ICT indicators and measurement
18. ICT training for entrepreneurs
19. Creative and digital content industries
20. Harmonization of norms and standards
21. Alternative and new ICT access technologies
22. Local technology industries
23. Private and public ICT access centres
24. ICT training for the disadvantaged, marginalized or vulnerable
25. Digital information and communication for environmental protection
26. ICT connectivity in libraries
27. ICT connectivity for local employment
28. Open-source, free and proprietary software
29. Technology hubs and parks
30. e-health
31. Internet governance
32. Software industry
33. Digital information for cultural heritage
34. Digital disaster management
35. ICT connectivity in health centres
36. E-justice
37. Telework

Analysis of the three parameters, namely social development, economic development and political development, indicates that the following factors are the ones with the greatest impact on the corresponding aspect of the information society:

Access	→	social development
Capabilities	→	economic development
Coordination	→	political development

It was interesting to note that the priorities of the Caribbean diverged substantially from those of the other Latin American subregions.


The Caribbean countries seem to be very hopeful that they will be able to deal with problems arising from their isolated island position. Accordingly, they rated e-education higher than the other subregions. They were also more confident that difficulties with the creation of economies of scale could be addressed by means of connectivity for local workers.

When it comes to the evaluation of policy instruments, it transpires that the Caribbean countries are focused exclusively on financial issues (second and third positions), while Meso and South America place virtually all policy-related issues among the top ten. Accordingly, financial instruments for ICT are expected to have a larger impact in the Caribbean than in South America. It is striking that national information society strategies and agendas are given a very low priority in the Caribbean.

Civil society seems to be increasingly living up to its role as a counterbalance to the domination of government and multinational enterprises and as an advocate for human rights within the information society. The sector clearly prioritizes transparency-related issues, such as e-government (first position) and public information provision using ICT (fourth position), ranking them highest of all four sectors. Directly dependent on the public and on international assistance, civil society is the only one of the four sectors that ranks financial instruments for ICT above financial resources.

In addition to evaluation of the current eLAC2007 Action Plan goals, the following issues were mentioned as suggestions for new goals to be included in the regional Plan of Action.

- Basic ICT skills certification
- Content for mobile phones
- Coordination of international organizations and actions
- Distance learning
- Distance medicine
- e-commerce
- e-democracy
- Electronic management of agriculture and fisheries
- ICT connectivity for tourist centres
- Inclusion of the gender perspective
- Inclusive citizen participation in ICT policymaking
- Intellectual property
- Interoperability between governments
- Voice over Internet Protocol (VoIP)

These issues were integrated into the second round of the Policy Delphi. The results of the rounds are available on the web site, for more information, and to participate in the Policy Delphi, see <http://www.cepal.org/socinfo> 



# Focus on the Caribbean: a lot going on and a lot to do for public policies

The discussion about ICT and development in the Caribbean region often turns on its potential to become an international hub for digital service hosting, outsourcing and delivery. Its strategic location, similar time zones, English-speaking population, cultural ties with Europe and North America and relatively short distances to North, South and Central America's major trading centres all make it a natural choice for the establishment of "near-shore" business operations connected to business and economic activity throughout the hemisphere. A recent inventory of ICT activities in the Caribbean carried out by ECLAC (Port of Spain and Santiago offices, in cooperation with the United Nations ICT Task Force) shows, however, that there are major challenges involved in grasping these opportunities. The study was presented at a workshop on Caribbean ICT Policy, hosted by the government of Barbados and jointly organized by ECLAC and CARICOM.

The economic structure, both at a local and a regional level, is not in all cases favourable to the digital paradigm, while competition with distant countries, remote events and trends in such "borderless business" is rapidly increasing. The CARICOM Single Market Economy (CSME), with its shared trade and economic policy framework, is a first step towards regional business integration and a unique opportunity for other regional organizations, such as the Association of Caribbean States (ACS), to join forces and increase the region's capacities and attractiveness. Countries like Barbados, Jamaica and Trinidad and Tobago have undertaken significant public ICT initiatives and learned a great many lessons. Their positive experience suggests that the rest of the region can benefit from participative formulation of national ICT strategies to facilitate buy-in, understanding and awareness among stakeholders, identification of priorities and goals and harmonization of ICT initiatives throughout the public sector and with other development policies. Lack of such national ICT strategies has created significant challenges for interconnection between ICT projects and prevented ICT from having their true potential impact on human development.

One might think that issues such as e-government, and especially local e-government, would not pose major challenges for the relatively small countries of the Caribbean. However, small groups of population are often distributed around different small island States and transportation challenges are often critical. This shows the potential for ICT to impact social and political processes, key challenges being to increase the transparency and accountability of public authorities, facilitate local governance and enhance civil society participation.

In order to effectively compete as a hub for ICT services, the Caribbean is aware that it must increase the reliability, redundancy and affordability of its telecommunications infrastructure, in particular by reducing the costs of international communications and interconnection among competing providers. In addition, the population and workforce need to be prepared for digital interaction. In this connection, some Caribbean countries are starting to investigate the successful universal access activities of some of their Latin American counterparts, including ICT community centres, cybercafés, universal access to ICT in schools and access points at public service offices such as libraries, post offices and municipal government facilities. Where they currently exist, initiatives of this type struggle to respond adequately to the demand for assistance, training and relevant content from actual and potential users.


One major limitation faced by most countries in the region is the limited availability of funding and financial resources for the implementation of ICT initiatives. Although a significant number of public ICT projects have received funding from international organizations, Caribbean nations are considering generating internal funding mechanisms for ICT development. Successful mechanisms so far include the implementation of universal access funds and the prioritization of revenue-generating, cost-saving and sustainable initiatives. Targeting the large diaspora population (close to 50% of total population in several countries) through the delivery of online services may also be an effective way of generating revenue and funds, particularly considering the large volume of remittances sent by its members and their close ties to their homeland and families in the region. With mobile phone penetration rates in excess of 50 subscribers per 100 population and rising quickly in many countries, there is immediate potential for the delivery of information, content, services and applications to the majority of the population through mobile services and handsets. Given the low penetration of computers and the Internet in the region, proper assessments should be conducted to compare the potential impact of Internet content and applications as against mobile content and applications.

Content is another area of focus. Because of its geographical characteristics, the region has a tradition of distance learning that has provided fertile ground for virtual education. In this dynamic field, many Latin American countries could learn from the Caribbean experience. Existing programmes from the University of the West Indies, as well as other private and public institutions, are currently proving a success and



leading the way in the use of ICT for capacity-building among the adult population. This growing popularity, however, needs to be complemented by the definition and adoption of common standards to ensure the quality of virtual education and distance learning. Existing medical science programmes and infrastructure, such as the facilities in Grenada and in Trinidad and Tobago, have immense potential to serve as hot spots and coordination centres for e-health initiatives to address the shortage of physicians and access to advanced medical services in the region. A combination of mobile and Internet applications with GIS technologies can greatly improve the efficacy of disaster preparedness, recovery and assistance efforts for the region’s vulnerability, which extends beyond the annual hurricane season and includes coastal erosion, seasonal floods and

unpredictable volcano activity and earthquakes. Another critical area that can greatly benefit from GIS and ICT, as experiences in Jamaica have shown, is the agricultural sector. Market information systems that provide local producers with access to price information and to alternative and new markets and customers can increase the profitability of local agricultural activities and greatly improve the efficacy of investment, production and selling decisions by local farmers and agricultural industries.

As the recent ECLAC study shows, information societies in the Caribbean have their own peculiar challenges. This opens up an extremely rich variety of areas for cooperation and the sharing of experience among the countries of the Caribbean and Latin America 

**Central ICT budget**

Countries	Availability of central ICT budget	For national ICT strategy	Central ICT budget For e-government projects	To promote universal access	To promote ITC industry development
Barbados	No	No	Partial <sup>1</sup>	No	Partial <sup>2</sup>
Grenada	No	No	Yes	No	No
Guyana	No	Partial <sup>3</sup>	Partial <sup>1</sup>	No	No
Jamaica	No	Yes	Yes	Yes <sup>4</sup>	Partial <sup>2</sup>
Saint Lucia	No	No	Partial <sup>1</sup>	No	No
Suriname	No	No	Partial <sup>1</sup>	No	No
Trinidad & Tobago	No	Partial <sup>5</sup>	Partial <sup>1</sup>	No	Partial <sup>2,6</sup>

- 1. Internal allocation of funds within government agencies as opposed to formal allocation in public budget.
- 2. Through business/technology parks.
- 3. Funds available for ICT strategy formulation.
- 4. The Universal Access Fund has been redefined to be used for ICT in education.
- 5. Funds available for ICT strategy formulation and some specific projects.
- 6. Technology park and clusters strategy under development.

**Success stories and cooperation potencial**

Barbados:	ICT-related legislation.
Dominican Republic:	Administrative systems for public education Crime enforcement information systems.
Guyana:	Multi-stakeholder consultation process for national ICT strategy definition.
Jamaica:	Trade facilitation system (Customs, import and export, e-manifests, etc.). Interconnection of government systems.
Saint Lucia:	Geographical information system (GIS). Census data and information mapping. Digital form processing.
Surinam:	Wireless broadband and VoIP services from private sector. Suriname National CMC Network.
Trinidad and Tobago:	Government infrastructure and backbone. Implementation of national ICT strategy. Smartcards. Small and medium-sized enterprises business-to-business e-marketplace.
Eastern Caribbean States:	Shared legislation.



# Digital terrestrial TV and technological convergence in Latin America and the Caribbean: the solution now?

More than 90% of the population of Latin America and the Caribbean has access to analogue television. This traditional ICT is considered an essential part of daily life by the great majority of the region's population. Four years ago, ECLAC suggested in "Road maps towards an information society in Latin America and the Caribbean" that the advent of digital terrestrial television would not only provide a substantial improvement in picture and sound quality, but would offer yet another opportunity to tackle the digital divide. Not only from the cost point of view, but because it "also offers a chance to overcome the often lamented habitual and cultural barrier to the adaptation of modern ICT, since it can be used to give millions of families interactive access to the world's global information infrastructure by building upon a highly familiar and widely used device".

The promise has not yet been fulfilled and, as so often, the anxiety to find a "silver bullet" hid many challenges that were discovered along the way. At present, digital terrestrial television (DTV) is the subject of intense public debate in the great majority of the region's countries, even as discussions on technical standards have proceeded at the national level. For some, the issue is simple and comes down to the government having to legislate quickly on the technical standard to be used, since the other elements will work by themselves. Others believe it is essential to reflect on and analyse the changes to come, especially those relating to inclusion, interactivity and diversity of content, for example. The nation that pioneered the regional debate was Brazil. The extensive tests which began in the country in 2000 have been described by international experts as the world's most complete.

Evaluations of technological platforms have centred on three standards that are competing for selection: the American standard (ATSC), the European standard (DVB-T) and the Japanese standard (ISDB-T), to which we may add the hybrid ultimately adopted by Brazil.

Any analysis of this cutting-edge technology must include both technical aspects, including the main advantages of the different standards (i.e., mobility, variety of channels, high resolution, user interactivity, industry and population impact) and the main factors (economic, social, etc.) that need to be considered, without neglecting the key regulatory aspects that come into play in a convergence context.

Unresolved issues for discussion include the financing of free-to-air TV, which has to reconcile, on the one hand, a public interest in better content and use as a tool for digital inclusion (along with computers) and, on the other, private interest in the financing of free-to-air TV, requiring programming which can attract high ratings. Another issue is the interoperability of different standards, considering the current pace of change in the world television terminal, mobile phone and computer industry: the number of convergent devices increases by the day, and these need to be able to receive signals under all existing standards, i.e., be capable of interoperating.

ECLAC is currently sponsoring large-scale research into the situation of eight countries in the region. Consideration is being given to the views of the main actors involved in this process of transformation, such as television and telecommunication regulators, television channels, civil society and academia. Also being studied in parallel with this is optimum spectrum use and the potential for programming that includes channel segmentation and high resolution. The new convergent digital platforms, such as IPTV, are still being evaluated and compared with other digital TV platforms such as cable and satellite.

The interim results of the ECLAC research have been used in the discussions of governments, media observatories and civil society in general in Chile, Colombia and Argentina and at the regional level in the eLAC2007 Regional Forum (in accordance with goal 7) and REGULATEL, among others.


There are more questions than answers, but the opportunity is still there to take advantage of these circumstances and turn the device that is used more than any other each day in Latin America and the Caribbean into an interactive gateway for the information society. Concerning the introduction of terrestrial DTV, ECLAC proposes a minimum agenda of measures based on the following points:

- Public coordination of the process with leading actors
- New broadcasting development policies
- New regulations: well-designed concessions, conditions for service provision, public interest obligations
- Handling and coordination of the "analogue switch-off" (transition plan and timetables)
- Spectrum planning and frequency allocation





It must be emphasized that discussions have not yet concluded, as a number of subjects remain unresolved. In this context, the decision as to which technological standard to adopt is only the first step. One issue is the financing of free-to-air TV, which has to reconcile, on the one hand, a public interest in better content and use as a tool for digital inclusion (along with computers) and, on the other, private interest in the financing of free-to-air TV, requiring programming that can attract high ratings. Provision of public services through a medium that will potentially reach the great majority of the regional population demands an effort that has yet to begin. How can DTV contribute to the provision

of e-government, education, health and commerce services? Who will provide this content? Another issue, lastly, is the interoperability of equipment working with different standards, considering the current pace of change in the world television terminal, mobile phone and computer industry: the number of convergent devices increases by the day, and these need to be able to receive signals under all existing standards, i.e., be capable of interoperating. The implications for universal access and competition between data service suppliers seems clear, and digital TV is evidently an issue that should be very near the top of the eLAC2007 regional agenda 


## eLAC2007 must be monitored for progress to be recognized

**T**here is a need to measure the current scale of ICT penetration and use, the capabilities generated by and for these technologies, and the progress made with implementation of public policies designed to extend access and connectivity to all sectors of society. To this end, the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) has been working to benchmark fulfilment of the eLAC2007 Action Plan, with a view to providing information on the progress made in this area by the Latin American and Caribbean countries. To carry out this work, OSILAC is continuously compiling data from different sources, including national statistics offices, administrative records such as those kept by telecommunications regulators and governmental institutions, international agencies and other academic and private sources.

The need to monitor the eLAC2007 Action Plan arises because countries need to have an idea of the state of access, usage and penetration within the region, and of the impact, limited or otherwise, that their policies are having in terms of universalization of access, modernization of the State and transparency in service provision and use of the resources

provided by government and other regional agencies. This monitoring takes account of the nature of the activities included in the plan, which can be classified according to their type of orientation, i.e., whether they are oriented towards action or quantifiable results.

The purpose of monitoring the eLAC2007 Action Plan is to track the state of infrastructure, access, use and capacities for ICT usage in different sectors of society in accordance with the eLAC2007 goals, and to ascertain the state of statistical information concerning ICT infrastructure, access and use in the countries of the region.

Following an initial survey of the situation, published in November 2005 (Where do Latin America and the Caribbean Stand in Relation to the eLAC2007 Plan of Action?, see [www.cepal.org/socinfo/osilac](http://www.cepal.org/socinfo/osilac)), a new monitoring report on progress in the region is now in preparation. It is expected to be published in mid-2007. If you are in possession of any statistics, publications or basic information that you believe may be relevant to the compilers, please do not hesitate to contact [osilac@cepal.org](mailto:osilac@cepal.org) 



# Recent publications

## **Economic Efficiency of Free and Open Source Software in the Public Sector: The example of Chile**

[www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/1/27531.xml&xsl=/ddpe/tpl-i/p9f.xsl&base=/socinfo/tpl-i/top-bottom.xsl](http://www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/1/27531.xml&xsl=/ddpe/tpl-i/p9f.xsl&base=/socinfo/tpl-i/top-bottom.xsl)  
Matthias Sax, October 2006,  
LC/W.106, 62 p.

This paper reviews the advantages and disadvantages of free and open source software (FOSS) in the public sector. It is based on a survey conducted in late 2004 with the informatics community of the government of Chile, which represents the key IT decision-makers in the Chilean public sector. The survey identified criteria that affect successful deployment and usage of FOSS. The balanced scorecard was used as a basic approach for identifying the strategic IT priorities and objectives of Chilean public institutions. In addition to the survey, respondents were interviewed to make out possible positive and negative effects on the strategic objectives due to the use of FOSS. The results show that also FOSS is still backward in terms of functionality and user friendliness in comparison with closed source software, it offers various strategic advantages like higher security and transparency which are very important especially in the public sector. Due to these advantages, FOSS can compensate or even outperform still existing disadvantages.

## **Tecnologías de la Información y la Comunicación e Industrias Culturales. Una perspectiva Latinoamericana**

[www.eclac.cl/publicaciones/DesarrolloProductivo/2/LCW92/W92.pdf](http://www.eclac.cl/publicaciones/DesarrolloProductivo/2/LCW92/W92.pdf)  
Jorge Katz, June 2006,  
LC/W.92, 118 p.

“Tecnologías de la Información y la Comunicación e Industrias Culturales. Una perspectiva latinoamericana” sets out to open up a space for discussion in three dimensions of a group of economic sectors, the cultural industries, that are of increasing importance for the gross output of the region’s countries. The first dimension is of an analytical character and the objective is to learn about the economics of this type of business, its structure and the behaviour and performance of the companies involved in it, with a view to opening up the debate on the creation of a broader framework of industrial organization for non-manufacturing activities. The second dimension is a discussion of the main economic features and recent evolution of the television, publishing, cinema and digital music industries in Argentina, Brazil, Chile and Colombia. The third dimension is the presentation of a set of general guidelines for public policies. The lead author, Jorge Katz, is an industrial economist with long experience of research into technological change and the development of policies in this field.

## **Las Instituciones de Formación Profesional (IFP) en América Latina y el Caribe y las Tecnologías de la Información y el Conocimiento (TIC)**

[www.eclac.cl/publicaciones/DesarrolloProductivo/1/LCW91/W91.pdf](http://www.eclac.cl/publicaciones/DesarrolloProductivo/1/LCW91/W91.pdf)  
Guillermo Labarca, May 2006,  
LC/W.91, 44 p.

Education and training has to be one of the strategic sectors in any policy that sets out to narrow the digital divide. For both general workers and knowledge workers, new specialities driven by digitalization and associated with education and training processes are the key to labour organization, now and in the future. The occupational training institutions (IFP) already operating in the region need to be considered and incorporated into policies in this area, which means bringing in technical and organizational change in these institutions and creating strategically appropriate options. Occupational training is the answer to rising demand in the world of work for people who are skilled in these technologies, and to the need to attain higher levels of efficiency, something that is particularly difficult in education and training because there is an inverse relationship between quality and coverage. Educational systems make use of ICTs because, among other things, these allow them to reach a considerably larger number of people and provide ongoing training to workers. A complementary condition for the effective use of ICTs in teaching is a large number of students, since infrastructure investments tend to be higher than with traditional training methods; the challenge for ICT use in training is to improve quality while increasing coverage.

## **Centros de acceso público a las tecnologías de información y comunicación en América Latina: características y desafíos**

[www.eclac.cl/publicaciones/DesarrolloProductivo/8/LCW88/PrimeraParte.pdf](http://www.eclac.cl/publicaciones/DesarrolloProductivo/8/LCW88/PrimeraParte.pdf)  
Oscar Maeso (Fundación Chasquinet), Martin Hilbert, March 2006,  
LC/W.88, 138 p.

The primary goal of this study was to identify and characterize the greatest possible number of programmes operated by centres for public access to information and communication technologies in the countries selected for the study. The result is a survey that must be treated as an initial approach to the present situation, and not as an exhaustive listing. A review of the literature on the subject indicates, however, that this study is the most thorough and wide-ranging to have been produced on the subject in the region to date. As part of the study, a total of 70 valid interviews were carried out with people running existing programmes in the region, in a total of 13 countries. The information collected in this



way is defined as primary source (PS) material. Additionally, secondary information was successfully obtained on 151 further programmes of this type (secondary source, SS). The study provides an initial approach to the actual situation of such programmes by analysing the average centre, and formulates some recommendations for improving initiatives of this type.

#### **Evaluation of e-Readiness Indices in Latin America and the Caribbean**

[www.eclac.cl/cgi-bin/getProd.asp?xml=/publicaciones/xml/0/24160/P24160.xml&xsl=/ddpe/tpl-i/p9f.xsl&base=/tpl/imprimir.xsl](http://www.eclac.cl/cgi-bin/getProd.asp?xml=/publicaciones/xml/0/24160/P24160.xml&xsl=/ddpe/tpl-i/p9f.xsl&base=/tpl/imprimir.xsl)

Michael Minges, December 2005,  
LC/W 73, 108 p.

Different institutions have used indices of “e-readiness” in an effort to quantify a country’s preparedness for the information society. These indices are composed of different indicators based on a variety of statistics. The weight of each index component and the statistics chosen differ from index to index. In the majority of cases, studies of e-readiness conclude with a ranking that lists countries by the greater or lesser progress they have made towards the information society (or aspects of it). After reviewing the main e-readiness indices, many of which were created from 2001-2003 and are brought out annually, this report sets out to determine whether there is a general theoretical framework that supports the different indices and explains their implications. A comparative analysis is carried out for the regional and subregional levels (Southern Cone, Andean Community, Central America, and the Caribbean). There is also an analysis of each of the 33 member countries of the Economic Commission for Latin America and the Caribbean (ECLAC), reviewing the reasons for the differences in country rankings between the different indices and touching on the characteristics and shortcomings of the indices. Lastly, there are some recommendations for theoretical work that is needed in this area, including a critical reflection on the composition of e-readiness indices.

#### **Where do Latin America and the Caribbean Stand in Relation to the eLAC 2007 Plan of Action?**

<http://www.eclac.org/cgi-bin/getProd.asp?xml=/socinfo/noticias/documentosdetrabajo/3/23113/P23113.xml&xsl=/socinfo/tpl-i/p38f.xsl&base=/ddpe/tpl/top-bottom.xslt>

OSILAC, November 2005,  
LC/W.32, 66 p.

Benchmarking and monitoring any multi-country, multi-thematic Plan of Action is a necessary but extremely difficult task. Although indicators are few and tests tend to be unobjective, the effort of evaluation has to be made. Quantifying goals set forth in a regional Action Plan related to a new and innovative subject such as information society development is even more challenging. It is for this reason that paragraph 28(f) of the Plan of Action of the World Summit on the Information Society (WSIS) stated that “All countries and regions should develop tools so as to provide statistical information on the Information Society, with basic indicators

and analysis of its key dimensions.” There is a strong interdependence between implementing policies to achieve agreed targets and monitoring them, but this link has only partially been realized. Goal 26.1 of eLAC2007 explicitly states the need to develop ICT indicators, differentiated by socio-economic characteristics, so that all actors involved with the information society acquire the ability to monitor, access and utilize technology.

#### **Estado situacional y perspectivas del derecho informático en América Latina y el Caribe**

[www.eclac.cl/cgi-bin/getProd.asp?xml=/publicaciones/xml/9/24229/P24229.xml&xsl=/ddpe/tpl/p9f.xsl&base=/tpl/imprimir.xsl](http://www.eclac.cl/cgi-bin/getProd.asp?xml=/publicaciones/xml/9/24229/P24229.xml&xsl=/ddpe/tpl/p9f.xsl&base=/tpl/imprimir.xsl)

Erick Iriarte Ahon, September 2005  
LC/W.25, 61 p.

The primary objective of this report is to take stock of the regulatory situation in different areas of the information society in Latin America and the Caribbean, as an input for the development of regional policies that can serve to harmonize the diversity that currently exists or provide a basis for the development of legislation in countries where the areas analysed are currently unregulated. With this objective in mind, the study centres on certain specific areas: digital signatures, electronic signatures, digital certificates, computer crime and ICT crime, personal data protection and privacy, and electronic contracts. These are the areas in which the region’s regulators have made the greatest efforts, and which therefore provide the best opportunity to take stock and analyse options for the future.

#### **Organización industrial y competencia en las telecomunicaciones en América Latina: estrategias empresariales**

<http://www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/4/23904/P23904.xml&xsl=/ddpe/tpl/p9f.xsl&base=/tpl/top-bottom.xslt>

Judith Mariscal, Eugenio Rivera, November 2005,  
LC/L.2423-P/E, 57 p.

The telecommunications industry in Latin America has undergone major transformations over the last decade. In the early 1990s, the implementation of market-friendly reforms led to the sector being privatized and liberalized in most of the region’s countries. We are now faced with an unexpected situation in which many of the companies that entered the sector in the early part of the post-reform period have disappeared. This document seeks to explain these upheavals and identify the tendencies that the sector may display in the near future. It analyses the development of the sector in Latin America since the reforms by comparing corporate strategies, performance and the structure of the market in which the two leading companies operate. Setting out from this analysis, the document identifies the appearance of a new stage in the sector’s development in the region, examining the new leadership role of mobile telephony, the increasing importance of broadband Internet, internal reorganization by companies in response to technological convergence, and the pressures leading to a degree of homogenization in the regulatory frameworks of the region.



# Preparing the II Ministerial Conference about the Information Society eLAC2007

**Interview with the Viceminister of Foreign Relations of El Salvador, Lic. Eduardo Cáliz, who is in charge of Information Society issues in the ministry, and who coordinates the II Ministerial Conference about the Information Society eLAC2007.**

**What does El Salvador expect as host country of the II Ministerial Conference about the Information Society eLAC2007, to be held in November?**

As host country for the next II Ministerial Conference about the Information Society eLAC2007, El Salvador expects to spur the use of information and communication technologies in favour of the country's social development.

Under this perspective, one of our priorities is to accomplish the United Nations Millennium Development Goals for 2015, we are sure that new technologies can contribute to set paths and advance in public policies concerning education, health and other social areas.

As host country for this conference what moves us is to verify objectively the progress of the Latin America and the Caribbean countries in the implementation of commitments made at the World Summit of Information Society (WSIS). For this reason, El Salvador in the spirit of integration, offered to host the eLAC2007 regional meeting and hopes that hosting this event will be a step forward to specify eLAC as a process, as an agenda, which integrates information society benefits into the social development of our countries. The presence of the delegates from the regional groups will allow a realistic revision of goals and objectives reached so far, and it is a good opportunity to assume new commitments according to regional priorities, always keeping in mind the global context. We would like to share experiences and participate in the construction of synergies between eLAC process and other existing regional initiatives aiming at constructing an information society (e.g. Plan Puebla Panama).


**What do you think so far about the eLAC2007 Regional Plan of Action?**

El Salvador supports the ECLAC resolution that helps turn eLAC into a process. Due to our early involvement in the Regional Follow-Up Mechanism, which was in charge of consultations that aim to the creation of the different regional working groups, we are deeply engaged in this process and we are ready to keep contributing as much as possible to consolidate it. We see the need for the eLAC process to promote a regional agenda of cooperation allowing us to reach the agreed objectives for the achievement of a humanistic, comprehensive and development-oriented information society.

**Do you believe the II Ministerial Conference about the Information Society eLAC2007 is a starting or an ending point?**

The II Ministerial Conference about the Information Society eLAC2007 should work as a checking point, helping us to reach and find articulations between different programs, projects, regional and sub regional initiatives in order to meet synergies towards the great goal of 2015. We see this conference as the follow-up of the information society process started in Geneva in 2003, where a Plan of Action and a Declaration of Principles were adopted. The existing links with the Millennium Development Goals, agreed at international level at the United Nations, were also highlighted in that occasion.

Thus, the eLAC2007 Regional Plan of Action is the application at Latin American and Caribbean scale of principles agreed in WSIS and follows the process initiated in Rio de Janeiro in 2005, during the Regional Preparatory Ministerial Conference of Latin America and the Caribbean for the second phase of the Summit.

Through measurable goals, we will be evaluating a range of diverse and new aspects to be approached for the first time in the region that will lead to guidelines for new goals and objectives 

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.

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