GLOBAL INFORMATION SOCIETY WATCH 2008

Focus on access to infrastructure

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Latin America and the Caribbean

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Introduction

The Latin American and Caribbean region is characterised by linguistic, cultural and economic diversity. Consequently, any generalisations will not apply to every country or even every area inside those countries. However, clear progress has taken place recently in access to infrastructure throughout the region.

Coastal areas, in particular, have enjoyed important progress thanks to their proximity to the landing stations of submarine systems, and the diversity of operators and technologies in their areas. Several new systems and landing stations either have been announced or have been connected in the last twelve months. The new international undersea capacity needs to be added to other important inland projects that are planned, which can contribute to bridging the divide between the coastal areas and the rest of the continent.

Data centre and switching capacities have increased dramatically through the creation of new facilities and the expansion of existing internet exchange points (IXPs). The last twelve months have also seen an increase in the deployment of broadband wireless technologies in the region. The new services running over these technologies are offering competitive services to rival digital subscriber line (DSL) and cable modems. Although companies are still focusing on big urban areas, broadband access is increasingly available in areas away from the main cities.

The region, nevertheless, faces political challenges that impact on the high prices of broadband access (TeleGeography, 2008a). And considering that network services are still primarily focused on highly populated urban areas, despite new developments, there are still limitations in terrestrial infrastructure. Other important challenges for the region are related to the regulatory area, either regarding the need for deregulation or for improving existing regulations in order to create the necessary enabling environment for the development of network infrastructure. There is also a need for the creation of policies that clearly establish social development goals.

Some of these issues are addressed by the Action Plan for the Information Society in Latin America and the Caribbean (eLAC2010),[1] adopted by Latin American and Caribbean governments in San Salvador in February 2008. The plan includes 83 goals in six areas, aimed at promoting the development of infrastructure in the region and providing reliable, "preferably high-capacity" network coverage for 70% of the population in urban areas and 60% of the population in rural areas by 2010.[2]

Backbone capacity in the region

Universal access to information and communications technologies (ICTs) demands establishing strategies at several levels and across several areas, with the involvement of all relevant stakeholders (from government, civil society and the private sector). At regional and national levels this means, among other things, developing strategies for the deployment and use of backbone infrastructure.

Building backbone capacity today requires the construction of fibre links inside urban areas and between cities, regions and countries. Long-distance fibre communications are normally carried over an undersea cable system.

The Latin American and Caribbean backbone infrastructure can be divided into three regions: the Meso-American region (Central American and northern South American countries), the Southern South American region, and the Caribbean region.

The Meso-American and Caribbean regions are located closer to the United States (US). In these two regions several submarine cable systems are available, particularly in the Caribbean Sea and the Atlantic Ocean. Consequently, most of the countries and territories here have access to more than one system (TeleGeography, 2008b). The reality on the Pacific coast is different, where only two or sometimes one system is available, and countries such as Colombia and El Salvador have no access to any system at all.

Several new projects were finished or announced during 2007 and 2008, including the new landing of the SAM1 cable system in Colombia;[3] the finalisation of the Caribbean Crossing cable system by Columbus Networks,[4] which will bring redundant capacity to the Eastern Caribbean Region; and the announcement of new systems that will serve the Dominican Republic and Netherlands Antilles.[5] A new cable system running all the way from southern Mexico to northern Colombia will run fibre on top of the electrical power cable system. This project is driven by different states as part of the Plan

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1 eLAC2010 is contained within a document entitled the San Salvador Commitment: www.cepal.org/socinfo/noticias/noticias/3/32363/2008-2-TICs-San_Salvador_Commitment.pdf

2 See the San Salvador Commitment/eLAC 2010.

3 www.telefonica-wholesale.com/ingles/notasprensa/notas/03-11-08.html?pais=www.telefonica.es

4 www.columbusnetworks.com

5 www.lacnic.net/en/eventos/lacniccaribe

Puebla Panama[6] and will provide alternative access to all the Central American undersea cable systems.

The Southern South American region consists of the southern Andean countries and the Southern Common Market (Mercosur) countries. Three systems are relevant in this region: the abovementioned SAM1 (implemented by Telefonica), SAC (Global Crossing)[7] and GlobeNet (Brasil Telecom).[8] This region has important backbone capacity with a diversity of carriers operating along the coastal areas. However, inland countries have difficulty accessing the backbone capacity at affordable prices.

A number of projects are underway in the region that are important to mention. One is the first high-capacity Uruguay-Argentina undersea network system which is being built by the Uruguayan state-owned telecom operator ANTEL and Telecom Argentina.[9] Another involves the use of long-distance electricity power cable systems to carry fibre optics. Using this particular technology, the company INTERNEXA plans to connect Venezuela, Colombia, Peru, Ecuador, Bolivia and Brazil.[10] Broadband over power lines (BPL) technologies, or using the residential electricity grid to provide broadband access, is also being explored. For example, the company EEQ (Empresa Eléctrica de Quito) has announced a BPL project to be carried during 2008.[11]

Competition in backbone services contributes to a reduction of the cost in megabits per second (Mbps) of access to international capacity for service providers. For example, just the announcement of the landing of the Telefonica SAM1 system in Ecuador has caused the cost per Mbps to the US to be reduced by 40%. Through this project, Ecuador will have its own undersea cable and will not depend on landing stations in Colombia. This also helps to improve regional interconnections, as regional capacity becomes less expensive compared to international links.

Nevertheless, a decrease in the cost of international connectivity does not necessarily impact immediately on reduced access costs for end-users. In the Caribbean, for instance, despite a clear improvement in network coverage, international connectivity is still controlled by a few dominant operators, which poses an important obstacle for the development of a truly competitive market (Stern, 2006). In other countries, such as Ecuador, internet users sign a contract that sets access prices for one year in advance.

This prevents changes in international costs having a direct impact on what the end-users pay. These examples show how regulatory issues and consumer policies can determine access costs.

Other infrastructure costs, such as those related to data centres, access devices, and interconnections, should also be considered. The data centre market in the region is quickly adopting international standards, and the number of available square metres is increasing rapidly. IXPs are common connection points for different organisations, including internet service providers (ISPs), carriers, content providers, etc. For the eLAC2007 Infrastructure Working Group report,[12] 21 IXPs were identified, and nine were located in Brazil. Since then, new projects have been concluded or have been announced in Brazil, Colombia, Curaçao, the Dominican Republic, Ecuador, El Salvador and Saint Martin.[13] In the case of Ecuador, the new IXP – part of the NAP.EC network built by AEPROVI[14] – will be located in the city of Cuenca (with a population of 280,000). This means that ISP traffic will no longer have to go through the metropolitan areas of Guayaquil and Quito.

"Last-mile" connectivity

DSL continues to be the preferred technology for "last-mile" connectivity, followed by cable modems and a variety of wireless technologies. Probably the most important change in the broadband market in the last twelve months is the deployment of third generation (3G) mobile networks.

The deployment of 3G mobile networks is bringing new players to the broadband market, even in regions with quasi-monopoly DSL provision. The deployment is currently focused on important metropolitan areas, but there are plans to expand the services to other areas over the next years. It is not uncommon in the Latin American and Caribbean region to find rural areas where the mobile system is the only available telecommunication service, and 3G has the potential to bring broadband services to those areas. Regulation related to costs of devices should be considered as a key issue if mobile technology is meant to have development purposes.

Regional priorities

On 20 August 2008, the Latin American and Caribbean Network Information Centre (LACNIC),[15] APC and the Information Network for the Third Sector (RITS) called a multi-stakeholder meeting in Montevideo, Uruguay. The

6 www.planpuebla-panama.org

7 www.globalcrossing.com

8 www.globenet.net

9 www.antel.com.uy

10 www.internexa.com

11 www.eeq.com.ec/htmlDocs/noticia.php?mn=6&n=54

12 www.cepal.org/socinfo/noticias/noticias/2/32222/GdT_eLAC_meta_1.pdf

13 www.lacnic.net/en/eventos/lacnicxi/napla.html

14 www.aeprovi.org.ec

15 www.lacnic.net

purpose of the meeting was to hold an open policy dialogue to identify relevant issues and priorities for Latin America and the Caribbean. These would input into the discussions and agenda of the third Internet Governance Forum (IGF). One of the panels ("How to reach the next billion users?") focused on the problem of internet access in the region. A diagnosis of asymmetries was presented (World Bank, 2008) which highlighted the fact that Latin America and the Caribbean have the least degree of fairness in terms of access to technological infrastructure, as well as in terms of education and income. For this reason, it was concluded that national and regional strategies should aim at reducing infrastructure asymmetries in practical ways and improving access to information. The panel also concluded that it is necessary to expand network coverage for broadband internet access in the region and, at the same time, make access relevant to the potential users' lives, which includes making content available that is consistent with the needs of different people.

The IGF process has shown consensus, among all stakeholders, about the inability of models based exclusively on market approaches to provide access to ICTs for all. More effective and solid regulatory frameworks need to be adopted in most of the countries in the region, and policies have to be harmonised at regional and sub-regional levels. This will make it possible for the coexistence of commercial and community or collaborative models for deploying and using infrastructure. Policy and regulatory coherence in the telecommunications sector is crucial to create an enabling environment for ICT access. The Latin American and Caribbean region needs to strengthen its capacity to participate effectively in shaping the global ICT policy agenda, which has an impact on the national and regional context. ▪

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GLOBAL INFORMATION SOCIETY WATCH or **GISWatch** has three interrelated goals:

- **Surveying** the state of information and communication technology (ICT) policy at the local and global levels

- **Encouraging** critical debate

- **Strengthening** networking and advocacy for a just, inclusive information society.

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