

ITU Workshop on “Apportionment of revenues and international Internet connectivity”

(Geneva, Switzerland, 23-24 January 2012)

International Internet connectivity (IIC) - individual country and organization experiences

***Pedro Oliva
Ministry of Information Science and Communication
CUBA
oliva@mic.cu***

Geneva, Switzerland, 23-24 January 2012



CONTENTS

- 1 COUNTRY INFORMATION***
- 2 ICT ACCESS IN CUBA: GENERAL INFORMATION***
- 3 IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY***
- 4 FINAL REMARKS***

23-24 January 2012

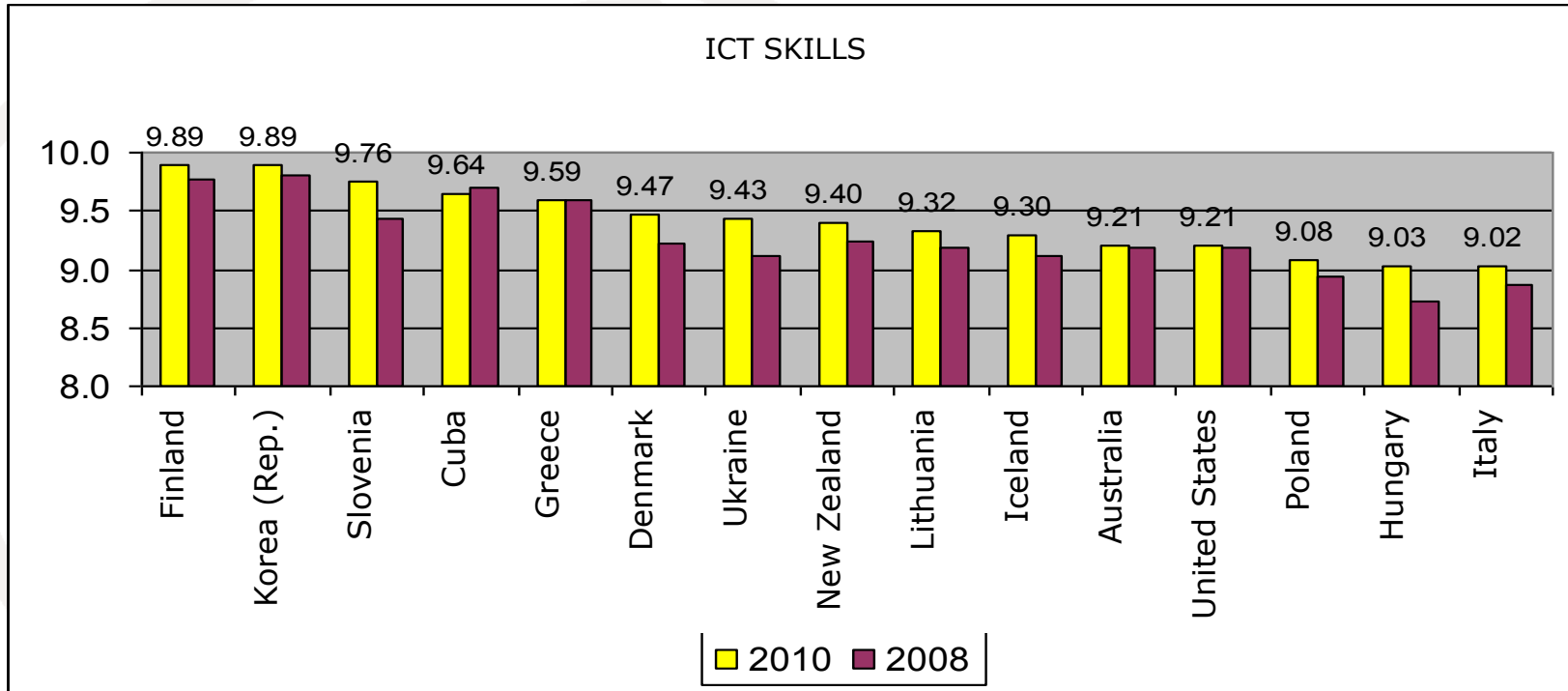
COUNTRY INFORMATION

- *Official name: Republic of Cuba*
- *Area: 109,886 sq. k.*
- *Population: 11,242,628*
- *Official language: Spanish*
- *Capital: Havana*
- *Gross domestic product: 5,428 USD/per capita*
- *Average temperature: 25°C*
- *Population with health insurance: 95%*
- *Life expectancy: 76 for men, 80 for women*
- *Inhabitants per doctor: 151*
- *Infant mortality: 4.7%*
- *Main sources of international revenue: nickel, tobacco, biotechnology products; tourism (2.5 million visitors annually).*

COUNTRY INFORMATION

Cuba has made remarkable progress towards achieving the Millennium Development Goals, in particular those related to education and health, with results equivalent and in some cases superior to those of developed countries. A recent ITU study confirms that Cuba ranks first in the Americas and fourth worldwide when it comes to developing the population's ICT skills.

ICT ACCESS IN CUBA: GENERAL INFORMATION



These results are due to the significant resources the country invests in the education system, which is free at all levels; over 160,000 students graduate every year from technological institutes and universities, including in computer science (2,000 engineers graduate every year).

ICT ACCESS IN CUBA: GENERAL INFORMATION

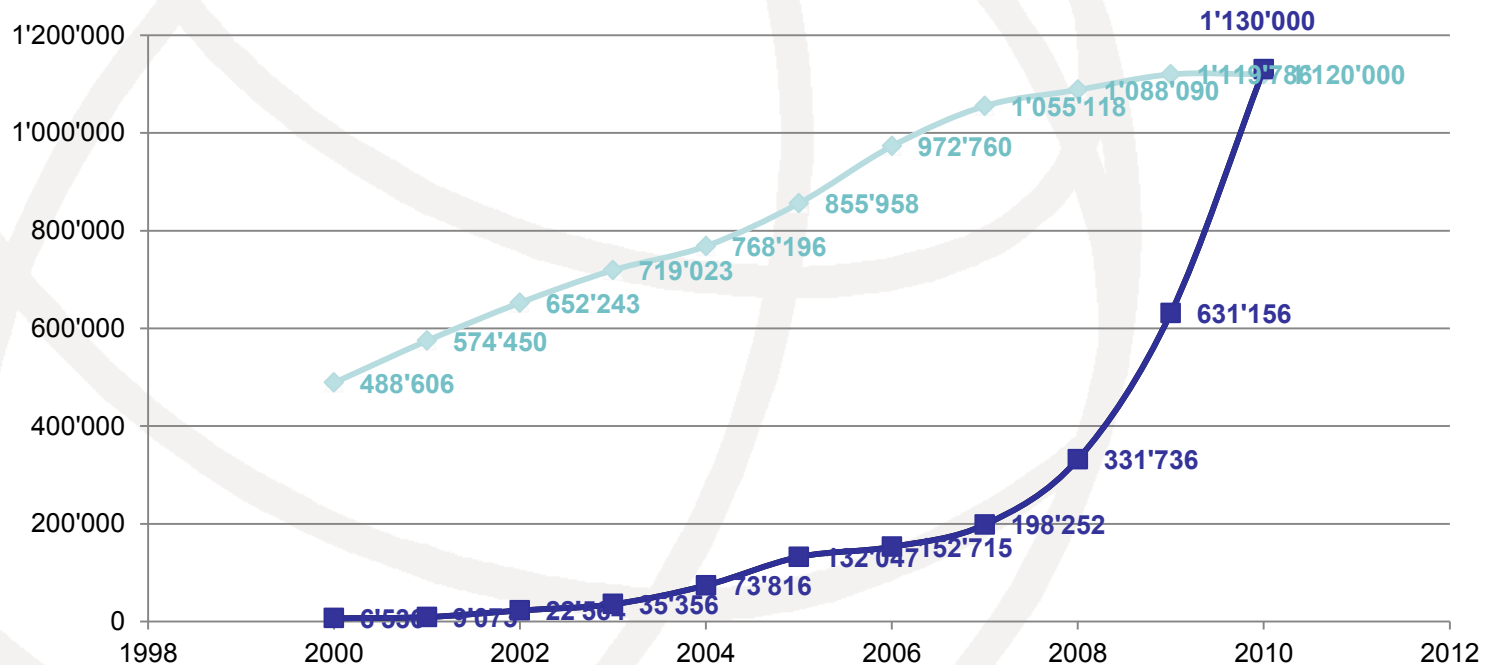
However, the difficult international economic conditions that have affected the country during the past 50 years have limited investment possibilities to expand access to and use of ICTs. Cuba ranked 107th out of 152 countries in the ITU ICT Development Index (IDI) in 2010.

At the end of 2011, the country had 724,000 computers, 65% of them connected in private networks with Internet access, and more than 500,000 webpages.

During this time, connections have been slow and expensive, because they have functioned via satellite links and bandwidth with an upload/download speed of just 650 Mbits/s.

DEVELOPMENTS SINCE 2005

The transport network has been optimized by replacing the national TDM network with an IP/MPLS network, the mobile cellular network has been modernized and expanded, the national fibre-optic network completed and international connectivity enhanced with the construction of a fibre-optic submarine cable.



IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

Even though more than 10 years have passed since the adoption of Recommendation D.50 in October 2000, the objective to have the countries involved in international Internet connectivity share the costs of interconnectivity remains unfulfilled. Developing countries continue to pay the full cost of interconnection links and gateways for access to this network, while operators in developed countries use these facilities to channel traffic without paying anything in return.

IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

During this time, many developing countries, the regional groups and other administrations have submitted contributions and proposals to SG3 meetings, to the Standardization Assemblies and to other meetings, including WSIS, suggesting agreements and supplements to the original recommendation, but without making progress towards implementation.

In August 2007, the Administration of Cuba submitted contribution COM 3-C17 to SG 3. That document, with the participation of the delegations present, contributed to the preparation of the report submitted by the Standardization Sector to the Second Meeting of the Internet Governance Forum, in Brazil, but it also was without consequences for the implementation of D.50.

The work currently being done by SG 3 is of special importance for measuring Internet traffic and the feasibility of applying the principle of network externalities to this service.

OTHER IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

The INTERNET payment model has further implications when applied to voice traffic, in respect of which agreements exist whereby the cost of interconnection is shared and each country pays the other for traffic completed on its network.

In such cases, replacing the traditional model with the Internet model may have a financial impact in some countries, as it implies that operators in less developed countries will have to pay the full cost of the link in both directions and not charge anything for incoming traffic.

OTHER IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

During the WPTF held in Lisbon in March 2009, the Chairman of the Expert Group on Reform of the ITR sent the Director of the Standardization Sector a list of what might be considered new and emerging telecommunication regulatory and policy issues. The list included the following topics related to international telecommunication service revenues:

- a) financial damage to a Member State as a result of inadequate measures applied by other Member States*
- b) alternative calling procedures*
- c) failure to send the number of the caller line (CLI)*
- d) fraud*
- e) hubbing*
- f) new models of charging (such as "sender keeps all")*

OTHER IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

The Cuban delegation to the WTPF submitted a contribution proposing adoption of the following actions, which remain necessary:

(a) To avoid the financial damages caused by the measures applied by other members and by actions associated with the omission or alteration of international call data, for the purpose of preventing identification of the originating country or user, through provisions preventing such actions;

(b) To recognize and apply the right of Member States to choose the model for establishing and billing international calls terminated on their territory, through bilateral agreements or other measures supporting the exercise of this right.

OTHER IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

In view of the above, and working on the basis of Article xx of the ITU Constitution, which recognizes the right of members to regulate telecommunications on their territory, the delegation of Cuba attending the September 2011 meeting of the Council Working Group to Prepare for the 2012 WCIT submitted contribution CWG-WCIT12/C. The proposals it contains on the ITR include a new article establishing the obligation to respect the right of Members to determine the payment procedure for the completion of international traffic on their territory.

IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY (IXP)

A positive development in recent years has been promotion of the creation of national and regional Internet exchange points (IXPs), which help make small operators less dependent on major suppliers of Internet backbone access.

Another advantage of IXPs is that they reduce broadband requirements in the international segment and improve the quality of service by reducing latency.

IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY (IXP)

Cuba has a national NAP that helps us participate in this initiative and share in its benefits. This option can have financial implications for some countries because of the cost of the centres. This might justify the creation of a fund for such cases.

The IXP initiative may require greater dissemination, promotion and organization to facilitate the participation of all stakeholders.

It is appropriate to bear in mind that although IXPs help reduce the effect of the payments made by developing countries for Internet connections, they do not meet the goal of sharing the costs of network access.

ADDITIONAL IMPLICATIONS OF INTERNATIONAL INTERNET CONNECTIVITY

Since Recommendation D.50 was first approved in October 2000, the role of the Internet in the political, economic, social and cultural relations of nations has steadily grown, with commensurate growth in the need for global agreements that facilitate the global management of this common resource, make it more secure to use, and promote fair and non-discriminatory conditions for Internet connectivity.

It is for this purpose that the Cuban delegation attending WTSA-08 in Johannesburg submitted contribution 105-S on the role of ITU in the implementation of WSIS outcomes with regard to the Internet. That contribution served as the basis for the adoption of Resolution No. 69 on the non-discriminatory use of Internet resources.

FINAL REMARKS

To sum up, the following recommendations may be useful in improving the conditions for international Internet connectivity and its effect on developing countries.

Promote the implementation of regional IXPs and the supply and direct exchange of content of interest between countries in each region, in particular between Latin American and Caribbean countries

Increase the quantity and quality of national and regional web content and sites

Coordinate ITU activities with a view to organizing the participation of developing countries in the establishment and application of regulatory policies promoting the implementation and operation of IXPs, in keeping with the principles of cooperation and support between countries

FINAL REMARKS

Pick up the pace of ongoing SG 3 studies for measuring Internet traffic

Continue promoting government determination and support to obtain high-level agreements facilitating a fair distribution of the costs of international Internet access