

# Achieving universal broadband Internet access in Jamaica: Some ideas for policy development

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## Introduction

### Broadband communications – the paradigm shift and regulatory implications

Over the last 15 years there has been a progressive shift in telecommunications markets, how they are regulated and the attendant implications for the delivery of broadband communications. This is particularly relevant for rural communities where access is retarded significantly due to large gaps in the network for Fixed Wireless, equipment costs and the training required to obtain community buy-in to the use of Information and Communication Technology (ICT).

When a monopoly incumbent existed for a wide range of services it was generally expected that the social goal of providing universal telephone service rested with the service provider. It was generally considered that universal service would be financed by the monopoly cross-subsidising this policy with revenues from long distance services.

With the advent of competition, particularly in mobile communications, network development for Internet service tended to be focused on the more lucrative business market, and hence urban communities, at the expense of high-cost, low income, rural areas. At the same time that communication needs grew from dial-up Internet to broadband Internet service the paradigm shift raised the question of how rural communications would be financed. Data from the International Telecommunications Union (ITU) suggests that there has been an expansion in the so-called Digital Divide – not only is there a greater emphasis on urban Internet access compared with rural access but families with higher incomes tend to be the ones with access rather than those with lower incomes. There is concern that the Digital Divide is growing, particularly so in rural communities.

Consequently, new regulatory approaches and policies may be required in this changing

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environment to ensure that rural communities have access to broadband Internet service.

### **Why is broadband Internet access important?**

Under the framework for the Millennium Development Goals (MDGs) poverty eradication is a major focus of attention. As part of the action plan or initiatives to address poverty alleviation access to the Internet is recognized as a critical goal. This was also recognized at the World Summit of the Information Society (WSIS) in 2005.

Broadband Internet access is a major plank of national and regional e-Government policies because the delivery of information and services to citizens requires that these citizens have access to broadband communications. A universal broadband Internet policy and associated strategy is therefore considered an essential social and economic goal.

Another consideration is that globally, and Jamaica reflects this as well, investment and expansion of basic telephone service has become flat while the cellular telephony market has ballooned considerably. This has contributed to a necessary re-definition of Universal Access, where the shift has been towards broadband rather than basic telephony, notwithstanding the ideal scenario in which some countries may yet be able to achieve universal access in both areas.

### **ICTs for development**

It is widely recognised that Information and Communication technologies (ICTs) constitute critical tools for the development and growth of any modern society and economic system. ICTs, and, in large part, the Internet have their major impact in transforming the way individuals, businesses and other parts of the society earn a living, communicate and interact. Specifically they can:

- ❑ Create wealth and foster economic growth
- ❑ Facilitate social development and improved citizen participation
- ❑ Improve government systems, service delivery and accountability



The documents adopted during the World Summit on the Information Society (WSIS<sup>1</sup>) effectively highlight the potential of ICTs and underlines the link between ICTs and social and economic development. The Geneva Declaration of Principles (DoP) and Plan of Action (PoA), and the Tunis Commitment (TC) and Tunis Agenda (TA) include over two dozen references that highlight how ICTs can help achieve the Millennium Development Goals (MDGs), contribute to economic growth, productivity, and sustainable development, create jobs and contribute to and improve the quality of life. For example, the WSIS DoP states that the international community is *“aware that ICTs should be regarded as tools and not as an end in themselves. Under favourable conditions, these technologies can be a powerful instrument, increasing productivity, generating economic growth, job creation and employability and improving the quality of life of all”*. The TA confirms that *“it will be possible to succeed in our challenge of harnessing the potential of ICTs as a tool, at the service of development, to address the national and local development priorities, thereby further improving the socio- economic development of all human beings”*.<sup>2</sup>

Jamaica has to compete globally in developing its human resources and attracting foreign investment. The decision by Australia to invest 31 billion U.S dollars in developing a sophisticated broadband network in competition with the existing monopoly is an indicator that traditional approaches such as competition and liberalisation as well as Universal Access policies, have failed to accomplish the goal of creating a knowledge-based information economy. Other traditional approaches such as the use of Access Deficit Charges are either being reformed or dispensed with for the same reasons. By implementing a policy which aims to provide every household with 100 megs of Internet access in eight years, Australia hopes to compete with Asian countries such as South Korea and Japan. Europe and North America have watched as Asian countries have emerged as the leaders in broadband connectivity which drives their economies. United States is also attempting to catch up by investing USD 7.2 billion via the

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1 The World Summit on the Information Society (WSIS) was held in two phases. The first phase took place in Geneva hosted by the Government of Switzerland from 10 to 12 December 2003, and the second phase took place in Tunis hosted by the Government of Tunisia, from 16 to 18 November 2005

2 World Telecommunications/ICTDevelopment Report 2006: Measuring ICT for Social and Economic development. 8<sup>th</sup> edition.



Obama-led stimulus package to stimulate broadband access while the Federal Communications Commission (FCC) has been considering the nature of this imbalance between urban and rural broadband access. It is in this context that ICT4D Jamaica is urging the development of a national broadband communications policy inclusive of a number of recommendations.

### **Executive summary of recommendations**

#### **1. Wireless co-location:**

(a) Actively facilitating co-location between wireless companies such as FLOW Jamaica and government agencies such as the Jamaica coast guard, defence force, police and fire service.

(b) Actively implementing co-location between wireless service providers, including cellular companies and FLOW Jamaica rather than leaving the onus on the carriers to co-locate. It also involves monitoring and regulating cost-based arrangements for co-location to guard against unfair costings as well as promoting co-location.

2. An incentive-based policy of wireless network development for rural areas. This involves rewarding wireless service providers with reductions in taxes and or licence fees based on agreed achievement of targets on network access to provide broadband communications.

3. Development of a policy on cellular use for development purposes, including agriculture and education based on best practices such as Bangladesh and the Grameen phone model, as well as others.

4. A pro-active policy to educate community members and promote the use of ICT's and broadband communications in rural communities.

### **The case of Jamaica**

Jamaica, the largest English speaking country in the Caribbean with an area of 10,991 km<sup>2</sup> (4243 mi<sup>2</sup>) and an estimated population of 2.68M<sup>3</sup>, is a country of contrasts. While renowned globally



for its physical beauty and the achievements of its people in the arenas of music, culture, sports and cuisine, the country grapples with significant social and economic challenges. With a GDP of US\$10,772M and average 2008 per capita income of just US\$7,500<sup>4</sup>, the country faces an unemployment rate of 10.2%, an estimated poverty rate of 10% and some 12% of the population is functionally illiterate.

Strategies to positively affect the country's development have over the past 10 years anticipated that ICTs would play a significant role in increasing the productivity of the people and the overall global competitiveness of the country. And indeed, there have been significant strides with respect to access to technology tools. For example, the liberalization of the telecommunications industry commencing in the late 1990's has resulted in increased access to mobile telephony. This has led to Jamaica currently having one of the highest mobile density levels in the world among both developed and developing countries. In 2006, Jamaica's overall telephone penetration level was 106 phones to every 100 inhabitants<sup>5</sup>, marking a significant improvement over a decade ago when the fixed-line teledensity ratio was fewer than 20 lines per 100 people.

The extent of Internet penetration in Jamaica however continues to lag behind its Caribbean counterparts, and within the country itself there is an access divide. For example a World Bank report estimated overall Internet usage among Jamaicans as 46.4% in 2006, however usage among low-income groups is only 21% (World Bank, 2006; Dunn, 2007). The most commonly available connectivity is still via dial up with some 50% of connections being via this technology. However, with the density of fixed lines lagging at 14.3%, the overall availability of connectivity is constrained. The data in table 1 shares general telecommunications statistics and gives vivid testimony to this fact.

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4 The World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html>

5 PIOJ 2007



Population	2.66 Million
Internet Subscribers	85, 400
Fixed Broadband Internet	79, 000
Cable Modem Internet Subscribers	1,000
DSL Internet Subscribers	41, 100*
Internet Users (estimated)	1, 300 000
Main Telephone Lines in operation	342, 000
Main Telephone Lines per 100 inhabitants	12.85

\* Data is for 2005

**Table 1: Key Telecommunications Statistics for Jamaica**

Coming on the roll out by one new provider of digital services inclusive of cable, Internet and land phone service (“triple play”) throughout Jamaica, broadband connections will increase considerably over the next few years. In addition, the recently awarded contracts amounting to US\$7.0M by the National Contracts Committee to two of the major service providers will see the building of an islandwide broadband network for schools. Notwithstanding, the challenge of affordable Internet access to the broader population remains an issue which disenables critical sectors of our society from accessing this powerful tool for self-empowerment.

#### **Current Policies and initiatives on Universal Access**

“Universal access (UA) generally refers to a situation where every person has reasonable means of access to a publicly available telephone [or other telecommunication services]. UA may be provided through pay phones, community telephone centers, teleboutiques, community Internet access terminals and similar means.”



The objective of a universal access policy is to:

- 1) promote national, political, economic and cultural cohesion;
- 2) promote balanced distribution of income and population within the country;
- 3) eliminate disparities between urban and rural areas;
- 4) ensure participation of society in the information and communication based economy.

Universal Access is addressed in the Jamaica Telecommunications Act of 2000 which governs the telecommunications industry. It covers interconnection, spectrum management, competitive safeguards, consumer protection, and in Part IV, universal service/access. The Act gives the Minister the responsibility for the development and implementation of any universality programme in Jamaica. Out of this mandate, the **Universal Access Fund Co. Ltd** was established in 2005, with a mission to facilitate the provision of universal access to the information superhighway by accelerating the deployment of broadband services. It is funded by a 2% surcharge levied on international calls that terminate in the island.

The main operating objectives of the Fund are:

1. Provisioning of an island wide broadband network that will allow public access to the information super highway through high Schools, Public Libraries, Post Offices and any other agencies/institutions as approved by the Fund's Board of Directors
2. Ensuring the collection of the service charge levy through the terminating carriers
3. Identifying suitable projects through which the Universal Service Obligation (USO) will be advanced

The main focus of the UAF Co. Ltd to date has been the e-Learning Project which accounts for almost 70% of the expenditure to date. The project, established in 2005, has as its main objective the use of technology to improve the quality of education delivered to students, enhancing their learning experience in the process, thereby improving the level of passes in the CXC/CSEC external exams. Other activities of the UAF have been support for the upgrading of Jamaica Library Service and the National Library; the development of project plans in collaboration with the Jamaican Postal Corporation; the provision of broadband facilities in pilot



post offices; defending the levy regime against challenges from foreign agencies; and recently the negotiation and granting of licences for two providers to establish the islandwide broadband network.

Another government initiative to broaden the reach of Internet access to the population is the Community Outreach Programme through which community access centres (CAPs) would have been implemented. This programme, since its inception up to January 2009 has rolled out just about 12 centers. This is much less than projected; 60 CAPs were to have been built all across the island and there is every indication that roll out will continue to be dogged by bureaucratic delays, and skewed toward outfitting of government installations.

### **Other opportunities**

In their current formats, it is unlikely that the present focus of the UAF and the Community Outreach programme will result in effective connectivity for many of the underserved areas of the country. We believe it is absolutely necessary to target that neglected part of the UAF's first objective which speaks to support for "an island wide broadband network that will allow public access to the information super highway through" **other agencies/institutions** as approved by the Fund's Board of Directors.

In order to facilitate this "island wide broadband network" however it would be necessary to make it obligatory for telecommunications providers currently rolling out leading telecommunications standards (such as 3G and 4G mobile telecommunications technologies) to ensure connectivity for rural and agricultural areas in their connectivity layout plan. Jamaica has been plagued by a reality wherein telecommunications service providers decide on regions to be outfitted based on the companies' financial models. This often results in rural and low income communities being left out of the connectivity circle to the benefit of more lucrative urban areas. We believe it is incumbent upon the country's government to ensure its most disadvantaged are catered for. Facilitating the inclusion of those at the lower rungs of the socio economic ladder into the "connectivity circle" would effect a necessary change in the currently one-sided approach to infrastructural development which benefits the service provider but not



the country on a whole.

Furthermore, the National Strategic Plan Jamaica 2030 vision that projects developed nation status on Jamaica by the year 2030 is predicated upon the widespread availability and use of ICTs as an enabler, inclusive of universal high-quality Internet access well before the year 2030. This goal will recede from view if strategies other than those posited by the UAF are not urgently adopted.

In our view, empowering the existing network of community-based centres and learning institutions other than schools that have a broad outreach to some of the same sectors of society that need broadband connectivity the most is a most urgent cause for action. We believe that the multiple literacies demanded of 21<sup>st</sup> Century teaching and learning as well as other developmental activities is demonstrably advanced by collaborations engaging networked applications enabled by broadband communications. In this context then, broadband must be defined at a bandwidth that allows for the transfer of multimedia files such as would be appropriate for a videoconferencing application with a throughput sufficient to avoid data loss.

We are therefore proposing that a policy framework that sustains affordable broadband access for disadvantaged groups serviced by civil sector organizations and which embraces a more comprehensive view of need be developed and implemented.

ICT4D Jamaica proposes that the Government of Jamaica adopt a policy framework for broadband deployment across Jamaica with the following objectives:

- 1) Stimulate and potentiate technology infrastructure deployments that lead to island-wide coverage within five (5) years
- 2) Seed demand by its own use of broadband for e-Government services
- 3) Seed public-private partnerships in furtherance of island-wide coverage
- 4) Encourage low cost and or open-source broadband technological solutions as “last mile” solutions to communities on the edge of the existing public network space with assured interconnections to public broadband networks within a defined standard technological



interface

- 5) Encourage the provisioning of revenue-neutral broadband installations at public non-governmental facilities engaged in education and training
- 6) Encourage the provision of free broadband telecommunications services, with a minimum broadband speed of 3Mbps to community based organizations providing Internet related services, education and/or training with the highest service levels by network operators in exchange for favourable and offsetting tax and duty considerations.
- 7) Universal Service is still legally defined as Plain Old Telephone Service (POTS) as a result of the dated Telecommunications Act, which was last changed a decade ago. Universal Service and Access are now more appropriately defined in the context of the degree of access to broadband communications and the Internet. The Universal Service objective - and thus the regulatory infrastructure – must now thus be predicated on the provision of the Internet and at broadband connectivity speeds.
- 8) Make it obligatory for telecommunications providers currently rolling out leading telecommunications standards to include rural and agricultural areas in their connectivity layout plans. Further, future contracts must not be granted unless it is demonstrated that access for rural and agricultural areas is planned for. Favourable tax and duty conditions may also be offered to companies to encourage these bridging of the digital divide objectives.

**ICT4D Jamaica recommends that the Government of Jamaica immediately authorize a drafting team composed of government technocrats and civil society experts to finalize and produce the definite policy structure as well as the specific initiatives that will implement these policy objectives.**

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