
Office of Utilities Regulation

Local Loop Unbundling for Cable & Wireless Jamaica

Consultative Document



OFFICE OF UTILITIES REGULATION

January 20, 2006

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Abstract

The Telecommunications Act 2000 (The Act) is the primary legislation governing Jamaica's telecoms sector. Under this Act the Office of Utilities Regulation has been assigned certain regulatory duties. These include the promotion and protection of the interests of the public and the facilitation of competition.

To facilitate increased competition in the markets for fixed line services and especially for broadband access and services, the Office's is of the view that it has become necessary to make rules that apply to the local loop irrespective of whether the relevant network components are being used to provide voice or data services. Therefore, this consultation on local loop unbundling (LLU) is not confined to any particular type of service. It is also to be noted that the highest attained fixed line household penetration in Jamaica is of the order 50% hence regulatory rules should try not to discourage further build out of the fixed network while endeavoring to ensure that broadband services are available at market rates to current fixed line subscribers.

This paper outlines the case for unbundling, along with the different types of unbundling. It also outlines the steps to achieving LLU and the proposed framework for conducting the cost-benefit analysis and the unfair burden test.

The Office has decided to 'red flagged' the issue of LLU. The 'red flag' highlights the importance of this matter for the industry, customers and government and the urgency with which we regard broadband access roll-out across the country. Hence, the normal consultation period has been reduced.

Comments from Interested Parties

Persons who wish to express opinions on this Document are invited to submit their comments in writing to the OUR. Responses to this document should be sent by post, fax or e-mail to:-

Patrick K. Williams
P.O.Box 593, 36 Trafalgar Road, Kingston 10
Fax: (876) 929-3635
E-mail: pwilliams@our.org.jm

Responses are requested by February 9, 2006. Any confidential information should be submitted separately and clearly identified as such. In the interest of promoting transparent debate, respondents are requested to limit as far as possible the use of confidentiality markings. Respondents are encouraged to supply their responses in electronic form, so that they can be posted on the OUR's Website.

Comments on responses

The OUR's intention in issuing this Consultative Document is to stimulate public debate on the important issues pertaining to Local Loop Unbundling (LLU). The responses to this Document are a vital part of that public debate, and so as far as possible, should also be publicly available. The OUR considers that respondents should have an opportunity both to examine the evidence and views put forward in other responses, with which they may disagree, and to comment on them. The comments may take the form of either, correcting a factual error or putting forward counterarguments and/or providing data relating to cost and revenues, etc.

Comments on responses are requested by February 17, 2006.

These comments should be submitted for presentation at the Internet Workshop scheduled for February 2006.

The Office is aware that the timescale for this consultation is abbreviated but is of the view that this is necessary given the urgent need to introduce competition in the markets for broadband products and services. Although the timescale for both responses to the Consultative Document and comments on those responses were reduced by one week, interested parties will have another opportunity at the scheduled Internet Workshop to make any additional comments.

Arrangements for viewing responses

To allow responses to be publicly available, the OUR will keep the responses that it receives on files, which can be viewed by and copied for visitors to the OUR's Offices. Individuals who wish to view the responses should make an appointment by contacting **Lesia Gregory** by one of the following means:-

Local Loop Unbundling for Cable & Wireless Jamaica
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Office of Utilities Regulation

Telephone: (876) 968 6053 (or 6057)
Fax: (876) 929 3635

The appointment will be confirmed by a member of the OUR's staff. At the pre-arranged time the individual should visit the OUR's offices at:

3rd Floor, PCJ Resource Centre, 36 Trafalgar Road, Kingston 10

The individual will be able to request photocopies of selected responses as well as comments on responses at a price, which just reflects the cost to the OUR.

Timetable

The timetable for the consultation is summarized in the table below:-

Summary of the timetable for public consultation

<i>Event</i>	<i>Date</i>
Publish Consultative Document	January 20, 2006
Response to this document	February 9, 2006
Comments on Response	February 17, 2006
Determination Notice	By April 14, 2006

This Consultative Document is not legally binding and does not constitute legal, commercial or technical advice of the Office of Utilities Regulation. This consultation is engaged in without prejudice to the legal position of the Office and its duties under applicable legislation.

This document will be available on the OUR's Web site at <http://www.our.org.jm>

CHAPTER 1: REGULATORY FRAMEWORK

1.0 The Telecommunications Act 2000 (The Act) is the primary legislation governing Jamaica's telecoms sector. Under this Act the Office has been assigned certain regulatory duties. The broad objectives of this Act are:-

- to promote and protect the interests of the public;
- to promote universal access to telecommunications services for all persons in Jamaica, to the extent that it is reasonably practicable to provide such access;
- to facilitate competition in a manner consistent with Jamaica's international commitments in relation to the liberalization of telecommunications; and
- to encourage economically efficient investment in the sector.

1.1 Section 30 - (1) of the Act states that, "...a dominant public voice carrier shall provide interconnection in relation to a public voice network in accordance with the following principles -

(a) the terms and conditions under which it is provided shall be -

- (i) on a non-discriminatory basis;
- (ii) reasonable and transparent, including such terms and conditions as relate to technical specifications and the number and location of points of interconnection; and
- (iii) charges shall be cost oriented and guided by on the principles specified in section 33;

(b) no unfair arrangements for cross subsidies shall be made;

(c) where technically and economically reasonable interconnection services shall be so diversified as to render it unnecessary for an interconnection seeker to pay unreasonably for network components or facilities that it does not require;”

1.2 The Office is of the opinion that Section 30 – (1)(c) implies that, in order to render it unnecessary for an interconnection seeker to pay unreasonably for network components or facilities that it does not require, LLU may be required. As per Section 83(2), the Office may make rules under sections 30(1) (c) "...only if it is satisfied on reasonable grounds that such rules are necessary in the interest of customers and that –

(a) the benefits likely to arise from the rules outweigh the likely cost of implementing them; and

(b) the requirement to comply with the rules will not impose an unfair burden on any carrier or service provider.”

1.3 Additionally, under Section 71- (1), “The Office may, make rules subject to affirmative resolution, ...prescribing any matter required by

this Act to be prescribed by such rules or any matter that it considers necessary or desirable for the effective performance of its functions under this Act.”

- 1.4 The Office’s is of the view that it may be necessary to make rules that apply to network components irrespective of whether these components are being used to provide voice or data services. Therefore, this consultation on LLU is not confined to any particular type of service.

CHAPTER 2: POLICY OBJECTIVES AND LOCAL LOOP UNBUNDLING

Introduction

- 2.0 The Government of Jamaica has, as one of its objectives, the roll out of broadband services to telecommunications customers in Jamaica. This was outlined in the Public Consultation on Telecommunications Policy of June 10th 2002. During this consultation process it was stated that an internal goal of Ministry of Commerce Science and Technology (MCST)¹ is to ensure that 40% of Jamaicans have access to Internet within 5 years.
- 2.1 The policy objectives subsequent to full liberalisation in March 2003 include (inter alia)
- Large numbers of Jamaicans employed in technology-intensive industries and highly skilled jobs, earning higher levels of income resulting in a higher per capita income
 - Increased numbers of persons with secondary and post-secondary education, with many having utilised e-learning
 - A growing cadre of knowledge workers in ICT
 - Pervasive access by individuals, families and communities to on-line resources and learning opportunities
 - The promotion of e-government and the strengthening of democratic government through increased participation and interaction among Jamaicans
- 2.2 None of these objectives will be met fully through narrowband or dial up access and to accomplish these aims a broadband access to the Internet must be assured.
- 2.3 The delivery of broadband access and the proliferation of competition in this service will enable the provision of fast, always-on Internet access and advanced interactive services to consumers and small businesses alike at competitive rates. This requirement has been identified as a key priority by the Government of Jamaica. The OUR, in order to facilitate this desire of government, in the most timely and efficient manner, wishes to consult with all players within the telecommunications industry.

¹ Formerly Ministry of Industry Commerce and Technology.

The Case for Unbundling

2.4 World-wide, the ownership of the local loop has given incumbent operators a competitive advantage due to the cost of replicating the facilities. The Act recognises that the ownership of such a facility could induce anti-competitive behaviour and therefore contemplated that one of the competitive safeguards could be that the resource should be made available to all telecommunications operators within the country. Today, because of the use of Digital Subscriber Line technologies the advantage held by the incumbent is even greater as it enables the owner to offer the use of broadband services to customers through Asynchronous Digital Subscriber Line (ADSL), Synchronous Digital Subscriber Line (SDSL) and other DSL technologies which enhance the basic copper pair and improve its performance.

2.5 From as far back as 2001, the OUR received a number of complaints in relation to the wholesale ADSL service offered by C&WJ. These primarily relate to:

- ADSL wholesale service orders not being processed fairly and expeditiously by C&WJ; e.g., C&WJ's ISP allowed to pre-empt the first in first out (FIFO) order queue for conditioned ADSL lines.
- Potential subscribers of other service providers being solicited by C&WJ's installation staff; and
- Cost of Digital Subscriber Line Access Multiplexer (DSLAM) ports and other facilities; and
- Cost of Internet Access Bandwidth

2.6 Currently, around the globe National Regulatory Authorities are overseeing Local Loop Unbundling (LLU) which enables other service providers to access the customer's line in order to offer their own broadband products. The Jamaican situation is no different. The need for unbundling on a transparent and non-discriminatory basis comes out of a concern that, as a result of C&WJ being the sole provider of an extensive fixed line network, it has maintained a strong position in various telecommunications services markets. This position has fuelled complaints such as those listed above.

2.7 A "competition bottleneck" exists when an incumbent faces little or no competition in the provision of an essential facility that is required by competitors in order to compete in particular markets. In telecommunications services markets, this bottleneck is the copper access circuit (standard copper telephone access circuit and Digital Subscriber Line (xDSL) facilitated by the copper telephone circuit).

2.8 Since the supply of the local loop is a bottleneck facility, unbundling is potentially important in removing this bottleneck and facilitating

competition in the telecommunications service markets such as high speed Internet access. LLU would involve the provision of new entrants with access to C&WJ's copper local loop to be used for their own services. Under the current telecommunications regime, services that are offered to the market are constrained by the incumbent's ownership and control of the only fixed network. Currently, alternative providers to C&WJ are not able to supply xDSL (copper-based) services (for example). LLU would allow access seekers to design, produce and market their own services as opposed to resell C&WJ's offerings (this kind of resale is referred to as "white labelling"). In turn, increasing competitive pressures is expected to lead to price reductions for consumers, and greater choice and diversity of products on offer.

- 2.9 Unbundling is likely to stimulate the provision of broadband access services which can be used to provide a range of services such as access to an Internet connection that provides high-speed, always-on access to the World Wide Web. With faster access and delivery of on-line services there will be greater opportunities for new and expanded business activities and therefore enhanced prospects for economic development. This is expected to provide cost effective delivery of business data and information in education, health and other services.

Types of Local Loop Unbundling

2.10 LLU is a process by which the dominant provider's local loops are physically disconnected from its network and connected to another communications provider's network. This enables competing providers, to lease part or the whole of a customer's access line and provide voice and/or data services directly to end users over that access line from a Point of Presence (PoP) located within or in proximity to the incumbent's facility.

2.11 Local Loop Unbundling (LLU) is regarded, by regulators worldwide, as an enabler to more competition. The cost of trying to imitate the local loop for a new provider is prohibitive and the general consensus is that the loop should be made available to all who wish to offer services to customers. Originally it was intended that other service providers could offer competitive alternatives for service provision of voice and data over other media, however, because of the development of Voice over Internet Protocol many service providers choose not to offer traditional voice to customers but leave that service to the incumbent. This has led to a number of variations in LLU. These are as follows:

- metallic path facilities / fully unbundled local loop
- the provision of access to a competing provider to the copper wires from the customer premises to a MDF that covers the full

available frequency range, including both narrowband and broadband channels, allowing that competing provider to provide the customer with voice and/or data services over such copper wires;

- shared metallic path facilities / shared access - the provision of access to a competing provider to the copper wires from the customer premises to a MDF that allows the competing provider to provide the customer with broadband services (including voice-over-broadband) while the incumbent continues to provide the customer with traditional communications;
- sub loop unbundling in which access to the customer's line is provided at a point closer to the customer, generally at a point of cross-connect which enables larger bandwidth offerings
- bit rate access in which the service provider simply provides services over equipment leased from the incumbent

2.12 For these facilities to be offered, the incumbent is required to offer a number of services to competing providers for which the competing provider pays an installation fee and monthly rental. The responsibility for maintenance of the loop remains with the incumbent.

- Internal tie cables- the provision of links to a competing provider that connect the local loop to the equipment of a competing provider within a MDF site; external tie cables- the provision of links to a competing provider that connect the local loop to the equipment of a competing provider outside a MDF site;
- site access- the provision of access to a competing provider to MDF sites in order for that competing provider to install and operate equipment within those MDF sites;
- co-location- the provision of space at a MDF site that enables a competing provider to locate equipment within that MDF site in order to connect to the incumbent's network and purchase LLU services from the incumbent,
- co-mingling- a type of co-location where a competing provider's equipment is fitted and operated in the same area as the incumbent could or does house its own equipment, without a permanent barrier between them;
- power- the provision of power to a competing provider at a MDF site that enables a competing provider to run its equipment at that MDF site; and
- ancillary services the provision of which is reasonably necessary for the use of the services listed above.

CHAPTER 3: PROVISION OF LLU

3.0 In order to ensure the successful implementation of LLU a number of steps have to take place as outlined below:

- The first step requires that the competing provider conduct market research in order to determine the likely take up of unbundled services by his potential customers. This is essential as equipment required to achieve unbundling of the local loop and connection to the competing provider's network is intricate and expensive. The incumbent should not be required to commit to expensive preparation of sites without stringent guarantees of competing provider's requirements.
- In step two, the incumbent is required to survey sites, determine access technology and type, physical access (e.g. co-location) and present to the competing provider an estimate of the costs based on the estimates of customer numbers provided by the competing operator. These costs are extremely complex and are often determined by reference to models such as Long Run Incremental Costs (LRIC) or variations on this as determined by the Office based on the principles outlined in Section 33 of the Act.
- Step three will be based on a Reference Unbundling Offer which will be published by the incumbent and will be in the hands of the National Regulatory Authority. This determines the manner in which ordering, provisioning etc are carried out amongst other things
- Step four is the physical connection of the access seeker to the incumbent's network.

3.1 All the above must be conducted in a non-discriminatory and transparent manner. It should also be at a cost oriented price to provide access seekers with sufficient information to make a considered judgment on whether to make or buy. In other words the process should not be priced too low and discourage competing providers from considering building their own network or too high to suppress competition.

3.2 Competing providers will also require access to information (e.g. network parameters) and an interface to the incumbent's Operational Support System (OSS) for provisioning, ordering, fault resolution and maintenance etc.

3.3 Customer billing arrangements may also be a matter to be considered and settled between the parties. It is also important to note that competitive operators in the market, including ISPs, will need to have

valid carrier licenses to qualify for unbundled network elements (UNE) from C&WJ.

- 3.4 There are also other considerations to be addressed in LLU and to determine the views of the telecommunications industry in Jamaica on this important issue we are asking for your views in determining the way forward. The normal consultative process recommends that the OUR give four weeks to reply but in this instance we have 'red flagged' this issue. The 'red flag' highlights the importance of this matter for the industry, customers and government and the urgency with which we regard broadband access roll-out across the country.
- 3.5 We have outlined the methodology for the cost-benefit analysis and the unfair burden test in Appendix I. Also, we have prepared a questionnaire in Appendix II and we hope that answers to this and a consolidation of all the replies and comments will enable the Office to take the necessary steps to create an environment that is conducive to the development of a telecommunications sector which is beneficial to all Jamaicans.
- 3.6 The Office intends to hold a workshop on Local Loop Unbundling in February 2006 at which we hope to consider and discuss with you, all the issues raised by your responses to the questionnaire. Please take time to answer it and put your point of view on a topic which is of the utmost importance to the advancement of Jamaica.

APPENDIX I: BENEFIT COST ANALYSIS METHODOLOGY AND UNFAIR BURDEN TEST

- 1.0 The Office shall make rules under Section 83 (2) of the Act "...in relation to the local loop ... only if it is satisfied on reasonable grounds that such rules are necessary in the interest of customers and that –
- (a) the benefits likely to arise from the rules outweigh the likely cost of implementing them; and
 - (b) the requirement to comply with the rules will not impose an unfair burden on any carrier or service provider.

The Office is therefore expected to undertake a cost-benefit analysis and to consider whether the obligation to offer LLU imposes an unfair burden on a carrier or service provider.

- 1.1 This Chapter proposes a methodology for estimating costs and benefits.

Benefit-cost methodology

- 1.2 As noted above, LLU enables competing providers, to lease part or the whole of customers' access lines and provide voice and/or data services directly to end users over the access line. The cost of trying to imitate the local loop for a new provider is prohibitive and the general consensus is that the loop should be made available to all who wish to offer services to customers.

- 1.3 LLU results in lower barriers to entry for broadband service providers and reduces the cost of customer switching between service providers. This means that the introduction of LLU may stimulate competition in the market for broadband retail services more quickly and effectively than would otherwise be the case. The benefits of the introduction of LLU resulting from an increase in competition may include:

- lower set-up and access prices;
- increased efficiency in the provision of broadband services; and
- increased choice broadband service provider and fixed retail call services.

- 1.4 However, the introduction and implementation of LLU will also impose costs on the operators:

In general there are three kinds of costs which may be incurred by the incumbent in implementing LLU.

- One off costs for line connections
- Charges for access to telecommunications facilities i.e. monthly line rentals

- Collocations charges including the cost of renting space, site preparation, site surveys, power usage and security
- 1.5 The cost benefit methodology to be applied in the assessment of LLU, estimates these benefits and costs and then compares the two. The results of the analysis will partially depend on the timescale over which the analysis is conducted. Initially, given the likely time-lag before consumers benefit from increased competition, it is possible that the costs of LLU may outweigh the benefits. However, over time the benefits from LLU are likely to increase relative to the costs. The OUR proposes to conduct the analysis on a two- year time horizon, in line with cost benefit analyses conducted by other regulatory authorities such as the Netherlands and other OECD countries.

Estimating the benefits of LLU

- 1.6 As set out above, LLU is likely to lead to an increase in the level of competition in Jamaica's fixed line telecoms sector. This increase in competition and in particular the likely fall in prices arising from increased competition is likely to create the economic benefits associated with LLU. These benefits can be divided into two types:
- Type 1 benefits accrue to those consumers who switch from the incumbent provider to an alternate provider. These benefits result from the lower access prices and possible increased quality and service features that migrating customers enjoy.
 - Type 2 benefits accrue to those consumers who remain with the incumbent operator. The increased level of customer switching that is precipitated by LLU forces the incumbent to also reduce tariffs and increase service quality.
- 1.7 In order to estimate the economic benefits of LLU, the OUR proposes to calculate the total consumer surplus that will arise from services that are provided by both C&WJ and by operators providing services via unbundled local loop². It will compare this with the consumer surplus that would have been generated if LLU had not been introduced. The difference between the two measures of consumer benefit is a measure of the economic benefits of LLU³.

² Consumer surplus refers to the net economic benefit that accrues to consumers from the consumption of a good. It reflects, for each customer, the difference between the amount the customer is willing to pay for a good and the amount the customer actually pays for the good.

³ The OUR notes that increased competition can lead to other benefits aside from lower prices. However, other benefits may be more difficult to quantify and as such the OUR proposes to concentrate on estimating the benefits that may accrue from lower prices.

- 1.8 Wherever possible, the OUR proposes to base the assumptions used in the calculation of the economic benefit of LLU on market forecasts provided by the operators, comparing the likely development of the market in situations where LLU is introduced and situations where LLU is not introduced. It will compare these with any international benchmarks that are available in order to ensure that the forecasts provided by operators are not inconsistent with the experience of other countries.

Estimating the costs of LLU

- 1.9 In addition to the costs outlined in paragraph 1.4 above which are directly imposed on the incumbent there is considerable complexity in determining the cost of LLU. In addition to the cost of capital, there is also the depreciation of the underlying installations (loops, ducts, manholes, cross connects etc). These costs are often the focus of arguments between the new entrants who maintain that the infrastructure has a long duration and the incumbent who argues for a short technical life on the grounds that the fast change of technology and new technical improvements could make the underlying technical infrastructure obsolete in the near future. A more detailed study of these costs is being addressed in a report of a study commissioned by the OUR.

Cost Recovery

- 1.10 Cost recovery is also a complex issue which is dependent on a number of inter-related factors. These include price rebalancing, geographic averaging and interconnection charges. The latter are generally addressed today through forward looking long run incremental costs (LRIC and variants) and the report referred to in 1.9 above addresses this. Rebalancing of subscriber prices and in particular fixed subscriber line charges is of considerable importance to new entrants. This is because new entrants wishing to take advantage of local loop unbundling will produce a business model focussing on low-value services and may be caught in a price squeeze and may be unable to offer service at competitive prices. This is because regulators try to price unbundled local loops at cost. If subscriber line charges are currently set below cost then unbundled loop prices for new entrants will be higher than the retail price charged for residential customer lines.
- 1.11 Recovery of the costs referred to in paragraph 1.9 will be the subject of a Reference Unbundling Offer which is published by the incumbent and overseen by the regulator.

Proposed General Approach for Unfair Burden Test

- 1.12 In the absence of a definition of “unfair burden”, the OUR considers that LLU might cause an unfair burden if it was not implemented in a way that was fair and reasonable to all parties. As such, a particular form of LLU may create an unfair burden if it does not allow an efficient operator to:
- a. earn a reasonable rate of return on the provision of services; and
 - b. compete effectively in the provision of all services.
- 1.13 In determining whether or not LLU may create an unfair burden, and in proposing an approach for ensuring that it does not, the OUR considers that it is necessary to review a number of factors. C&WJ may incur a number of costs due to a requirement to offer unbundled local loops. Thus, ensuring that this does not form an unfair burden on any operator, the OUR will require a ‘fair and reasonable’ approach to the recovery of these costs.
- 1.14 The introduction of competition through LLU is also likely to reduce C&WJ’s share of the retail fixed line services markets. C&WJ currently faces a number of regulatory obligations that result from its position as a dominant operator. As competition develops in these markets the OUR will continue to review C&WJ’s regulatory obligations to ensure they remain appropriate and do not result in an unfair burden being placed on C&WJ.

APPENDIX II: QUESTIONNAIRE ON THE ISSUE OF LOCAL LOOP UNBUNDLING

- Question 1. Do you consider that Local Loop Unbundling will be a key enabler for the development of competition in the Telecommunications Sector?
- Question 2. Do you agree that C&WJ should be required to provide LLU services?
- Question 3. Do you consider that it is necessary and appropriate to regulate LLU to address C&WJ's market power in the wholesale local access market?
- Question 4. Do you agree that a requirement to publish a Reference Unbundling Offer should be imposed on C&WJ?
- Question 5. Do you agree that charges should be set for the following LLU services?
- Metallic path facilities/fully unbundled local loop- rental, connection and disconnection;
 - Shared metallic path facilities/ shared access – rental, connection, disconnection and conversion to a fully unbundled loop;
 - Internal tie cables – rental, connection and jointing;
 - External tie cables- rental and connection;
 - Pull through for external tie cables – rental and connection;
 - Power
 - Ventilation and conditioning
- Question 6. Do you consider that the OUR should set charges for any services in addition to those listed above? If so, explain?
- Question 7. Do you consider that the OUR should specify the contents of the SLA and SLG for LLU services?
- Question 8. Do you agree that LLU system set-up costs should be pooled together with equivalent C&WJ DSL system set-up costs and recovered across all DSL lines?
- Question 9. Do you agree that cost accounting and accounting separation requirements should be imposed on C&WJ in the wholesale local access market and in collocation?

- Question 10. Do you have reasonable estimates on how many customers you expect to require your services if LLU is implemented? Please submit your estimates along with the methodology for deriving the same.
- Question 11. Do you have plans for delivering access to customers without recourse to LLU?
- Question 12. Do you anticipate that there will be significant demand for unbundled local loops? If yes, what is the expected level of demand?
- Question 12(i). Why do you think this will be so? Provide a detailed explanation.