



# **FAIR TRADING COMMISSION**

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## **DECISION**

### **Cable & Wireless (Barbados) Limited Draft Reference Interconnection Offer (RIO) 2017**

**DOCUMENT NUMBER: FTCUR/DECRIO/CW-2019-02**

**DOCUMENT TITLE: Decision on the Cable & Wireless (Barbados) Limited Draft Reference Interconnection Offer (RIO) 2017**

**ANTECEDENT DOCUMENTS**

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FTC/UR/ 2010-01	Decision on the Cable & Wireless (Barbados) Limited Reference Interconnection Offer	February 22, 2010
FTC/URD/CONRIO-2019-01	Consultation on Cable & Wireless (Barbados) Limited Draft Reference Interconnection Offer (RIO) 2017	January 2, 2019

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## SECTION 1 SUMMARY

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On September 25, 2008, the Fair Trading Commission (the Commission) requested that Cable & Wireless (Barbados) Limited (C&W) file a Reference Interconnection Offer (RIO) that would set out the terms and conditions for the interconnection of mobile, domestic fixed wireless and international service providers with its public telecommunications network. This RIO, the RIO 2010, was approved on February 22, 2010. On April 9, 2015, citing a new set of developments in the telecommunications sector, the Commission requested that C&W submit a revised RIO for review. The Commission considered that the RIO 2010 no longer accurately reflected network and industry conditions due to considerable technological progress and changes to interconnection charges<sup>1</sup> brought about by the Commission's Decision on Long Run Incremental Cost (LRIC) Interconnection Rates 2015. The revised draft RIO was submitted on July 20, 2015 and reflected proposed changes to rates and updates in line with technological developments. On September 8, 2017, the Commission asked C&W to assess the draft RIO to determine if any further adjustments were required, since a significant period had passed. A revised draft was submitted to the Commission on October 12, 2017 (Draft RIO 2017). Consequently, the Commission initiated the review and issued a public consultation on the Draft RIO 2017 on January 2, 2019.

The consultation sought to solicit comments on and ultimately assist in determining the following:

- a. The inclusion of a Public Land Mobile Network (PLMN) Transit Charge as found in the Commission's Decision on the Interconnection Dispute between C&W and Digicel (Barbados) Limited (Digicel) of June 2013;
- b. Whether the Draft RIO 2017 addresses the various technological advances in the telecommunications/information and communications technology (ICT) industry; and
- c. Any other terms and conditions that may be deemed necessary.

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<sup>1</sup> These are the wholesale charges paid by licensed service providers to other licensed service providers for the terminating and transiting of telephone calls from one network to the other.

There was only one response to the consultation. It came from C&W itself, essentially agreeing with the views of the Commission expressed in the Consultation Paper (FTC/URD/CONRIO-2019-01).

The Commission is satisfied that the Draft RIO 2017 accurately reflects the present state of the sector by appropriately including reductions in interconnection charges and advancements in network technology.

The Commission therefore approves the Draft RIO 2017 effective from April 17, 2019 and determines the following:

- a. **The Public Land Mobile Network (PLMN) Transit Charge, as found in the Commission's Decision on the Interconnection Dispute between C&W and Digicel (Barbados) Limited (Digicel) of June 2013, is not required;**
- b. **The general structure of the Draft RIO 2017, inclusive of its standard terms and conditions, remains adequate;**
- c. **The rates and rate structure for interconnection charges are now congruent with those approved in the Commission's Decision on Long Run Incremental Cost (LRIC) Interconnection Rates 2015; and**
- d. **The Draft RIO 2017 adequately addresses the various technological advances in the telecommunications/information and communications technology (ICT) industry, and shall now be adopted as the RIO 2019.**

## SECTION 2 INTRODUCTION

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A RIO sets out the terms and conditions under which a telecommunications service provider or carrier will permit another service provider or carrier to interconnect with its network. Interconnection is a vital process for two (2) main reasons:

1. It facilitates the delivery of telecommunication services and traffic within and across borders; and
2. It facilitates the growth of competition in the telecommunications/ICT sector. If prospective providers recognise that a regulatory framework is characterised by fair and non-discriminatory access to the incumbent provider's network, there is likely to be greater market entry. This benefits the consumer as it can have the effect of driving prices down and forcing service providers to improve products and service delivery. Additionally, it has the potential to encourage a greater influx of foreign direct investment.

Since the approval of the RIO 2010, the telecommunications/ICT industry in Barbados has seen significant developments which, in the Commission's view, warranted a review of the same. The granting of a full domestic license to Digicel in 2012 precipitated a variation in the interconnection agreement between C&W and Digicel, originally approved by the Commission in 2004. When the parties' negotiations of the variation agreement broke down, C&W referred the dispute to the Commission for resolution, in accordance with the Commission's Decision on Interconnection Dispute Resolution Procedures, dated June 30, 2003. A major aspect of this interconnection dispute involved the inclusion of a Public Land Mobile Network (PLMN) Transit Charge, payable to Digicel, since calls must transit its mobile network in order to connect to its Public Switched Telephone Network (PSTN).

The need to review the RIO 2010 is also reinforced by the Commission's Decision on Long Run Incremental Cost (LRIC) Interconnection Rates 2015, which determined that there would be reductions in the interconnection rates for Fixed Transit, Fixed Termination, Mobile Transit and Mobile Termination interconnection services.

Lastly, there has been rapid development of technology in the global telecommunications/ICT sphere. The sector in Barbados is no different, with traditional telecommunications services having to compete with newer disruptive technologies, such as wireless broadband and Voice over Internet Protocol (VoIP)<sup>2</sup>. Additionally and perhaps more importantly, the network technology used for fixed telephony has evolved a great deal, with traditional copper wires being replaced by fibre optic technology, bringing far greater speed and data transmission capacity. The Commission considers it reasonable that these technological advances must be reflected in the RIO in order to accurately represent the present state of the networks and the changes in the processes and standards required for interconnection.

In view of the aforementioned circumstances, the Commission presents herein its analysis and determination in respect of the Draft RIO 2017, as submitted by C&W. It remains vital to ensure that the RIO continues to be equitable in the treatment of all licensed telecommunications providers in accordance with the Telecommunications Act, CAP.282B (TA).

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<sup>2</sup> VoIP is a technology that allows the user to make calls using a broadband connection as opposed to the traditional analogue telephone connection.

### SECTION 3      LEGISLATIVE FRAMEWORK

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The telecommunications sector is regulated by the Commission, as well as the Minister responsible for Telecommunications through the Telecommunications Unit in the Ministry of Innovation, Science and Smart Technology. The industry is governed primarily by the TA and sections of the Utilities Regulation Act, CAP. 282 (URA) of the Laws of Barbados. The sections of the TA which relate to interconnection are cited below.

Section 25(1) of the TA states:

*“A carrier shall provide, on request from any other carrier, interconnection services to its public telecommunications network for the purpose of supplying telecommunications services in accordance with the provisions of subsection (2).”*

Section 25(2) of the TA states:

*“Interconnection services referred to in subsection (1) shall*

- (a) be offered at points, in addition to network termination points offered to the end-users, subject to the payment of charges that reflect the cost of construction of any additional facilities necessary for interconnection;*
- (b) be on terms that are transparent and non-discriminatory;*
- (c) in respect of the interconnection charges and service quality of the interconnection services, be no less favourable than similar services provided by the interconnection provider for
  - (i) its own purposes;*
  - (ii) any non-affiliate service supplier of the carrier;*
  - (iii) a subsidiary of the carrier; or*
  - (iv) for similar facilities so provided;**
- (d) be made available in a timely fashion;*
- (e) be offered at charges that are cost-oriented;*
- (f) be offered in such a way as to allow the requesting carrier to select the services required and not require the carrier to stand the cost of network components, facilities or services that are not required or have not been requested by that carrier; or*



*(g) allow for end-users of public telecommunications services to exchange telecommunications with other users of similar services regardless of the carrier to which the end-user is connected."*

Section 25(3) of the TA states:

*"A carrier shall provide interconnection to its network*

- (a) on such reasonable terms and conditions as the interconnecting parties agree through commercial negotiations;*
- (b) consistent with an approved Reference Interconnection Offer; or*
- (c) where there is no agreement between the parties, on such terms and conditions as the Commission determines in accordance with section 29 applying the principles established under this Act, and under any approved Reference Interconnection Offer."*

Section 26(1) of the TA states:

*"A dominant carrier shall file with the Commission a Reference Interconnection Offer, also referred to in this Act as an "RIO", that sets out the terms and conditions upon which other licensed carriers will be permitted to interconnect with the interconnection provider's public telecommunications network."*

Section 26(2) of the TA states:

*"The terms and conditions referred to under subsection (1) may include the following:*

- (a) a description of interconnection services to be provided;*
- (b) terms of payment, including billing procedures;*
- (c) location of points of interconnection;*
- (d) technical standards for interconnection;*
- (e) processes for the testing and establishment of interconnection;*
- (f) interconnection charges;*
- (g) the procedure in event of alterations being proposed to the network or services, of services to be offered by one of the parties;*
- (h) access to ancillary services;*

- (i) traffic forecasting and network management;*
- (j) maintenance and quality of interconnection services;*
- (k) the duration of the RIO;*
- (l) limitation of liability;*
- (m) indemnity;*
- (n) dispute resolution procedures; and*
- (o) confidentiality in relation to certain aspects of the agreement."*

Section 27 of the TA states:

*"(1) The RIO shall not take effect unless approved in writing by the Commission.*

*(2) Where the Commission considers that the RIO or any part of the RIO is inconsistent with the principles of interconnection as set out in section 25(2), the Commission may refuse to approve the RIO or a part of the RIO outlining the inconsistency and giving reasons for its decisions.*

*(3) In deciding whether to approve or refuse an RIO the Commission shall*

*(a) consult with the carrier providing the RIO and any other carriers likely to seek interconnection to that carrier's network; and*

*(b) have regard to*

- (i) the interconnection principles set out in section 25;*
- (ii) the interconnection policy specified by the Minister under paragraph (i) of subsection (2) of section 4;*
- (iii) the need to promote competition;*
- (iv) the long-term interests of end-users; and*
- (v) the submissions, whether oral or written, of the carriers providing and seeking interconnection.*

*(4) Where the Commission approves an RIO of a carrier or part of that RIO then it shall make a declaration as to the approval specifying the date on which the approval takes effect.*

- (5) *Where the Commission refuses the RIO of a carrier or part of that RIO, the Commission shall consult with the carrier in order to resolve the inconsistency with the interconnection principles referred to in section 25; and the carrier may amend the RIO to remedy the inconsistency.*
- (6) *Where the Commission is satisfied that an amendment of an RIO by a carrier pursuant to subsection (5) satisfies the interconnection principles referred to in section 25, it shall approve the amended RIO and the carrier shall file the amended RIO with the Commission."*

## **SECTION 4 THE COMMISSION'S ANALYSIS**

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The Commission, in its analysis, considered the Draft RIO 2017, as well as the submission from C&W in response to the consultation in which it addressed two (2) main issues, i.e. technological changes and the PLMN transit charge. No responses to the consultation were received from any other carrier. The following outlines the various changes reflected in the Draft RIO 2017 and the rationale for each.

In addition to the principles outlined in Section 25 of the TA, the Commission's analysis embodies a general practice gleaned from its examinations of RIOs approved in international jurisdictions. Accordingly, new RIO iterations build on the foundational principles established by earlier versions. Consequently, the Commission determines that it is not necessary, at this time, to make substantive wholesale changes to the existing structure of the RIO apart from what is set out herein. In terms of the sections of the RIO, which are outlined below, these are maintained in the Draft RIO 2017, indicating that there has been no change to its fundamental structure. This paper outlines determinations on major substantive changes in the RIO.

The RIO 2010 consists of the following sections:

- (a) Legal Framework
- (b) Definitions
- (c) Service Descriptions
- (d) Service Schedules
- (e) Joint Working Manual
- (f) Parameter Schedule
- (g) Tariff Schedules

### **1. General Adjustments to the RIO 2010 structure**

- The Legal Framework includes adjustments to sections 11.7 and 21.1, along with other minor changes, i.e. in 11.7, the phrase "in the first 12 months after the signature of this agreement" has been removed. The language is now simpler and more

general. Additionally, 21.1 outlines how either party may amend the agreement. Part b of this section was changed to indicate that amendment to the agreement is allowed in the case of a material change that affects the “commercial or technical basis” of the agreement. Previously, it included a clause that allowed amendment to the agreement if certain services could not be provided, either physically, technically or commercially. This clause was removed;

- The Definitions section includes a few minor changes such as the removal of unnecessary terms, i.e. terms that are no longer used or that refer to services no longer offered;
- The Service Descriptions section omits the International DQ Service as well as the section entitled “Review and Amendment of Incoming International to Mobile Termination Charge”.
- The Service Schedule also omits the International DQ Service<sup>3</sup>.

The Commission does not consider these minor amendments to have any significant impact on the conformity of the Draft RIO 2017 to the principles of Section 25 of the TA.

## **2. New Technology**

There have been significant technological changes which together form the basis for the amendments to the RIO that bring it into alignment with what currently obtains in the sector. The Draft RIO 2017 removes all previous references to “T1, 1.544 Mbit/s<sup>4</sup>” Network Links for services contained within the Service Schedule altogether. The technology currently in use provides for speeds far beyond the capability of a T1 line.

Another notable adjustment is that the title of the Joint Working Manual in the Draft RIO 2017 is “Joint Working Manual for Session Initiation Protocol (SIP) Interconnection”

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<sup>3</sup> C&W does not offer International Directory Assistance.

<sup>4</sup> A T1 line is a leased line brought into the home or office, which can be either fibre or copper. It can carry data at a rate of 1.544 megabits per second and is significantly slower than the speeds available with current fibre systems.

(JWMSIP), whereas in the RIO 2010 it was simply entitled “Joint Working Manual” (JWM). This name change reflects the substantive change in the network architecture used for fixed line telephony, i.e. a shift from circuit switched to packet switched technology. SIP is used in internet telephony and in Internet Protocol (IP) telephone systems for voice calling, video calling and instant messaging. It is a communications protocol for signalling and controlling multimedia application sessions. The technical specifications described in the JWMSIP, state that the Carrier System is capable of supporting a one (1) Gigabit Ethernet Network Link as opposed to eighty-four (84) 1.544 Mbit/s<sup>5</sup> Network Links, as per the RIO 2010. A one (1) Gigabit (1,000 Megabits) capacity is much higher than the previous capacity of eighty-four (84) times 1.544, (129.70 Megabits).

The Commission considers that this is a clear indication of the upgrades in the technology utilised.

In its response to the consultation, C&W notes that it has replaced all references to Time Division Multiplexing (TDM)<sup>6</sup> interconnection with SIP interconnection. It further indicates that the network architecture for fixed line telephone has moved away from circuit switched to packet switched technology. TDM interconnection remains supported but going forward, all new interconnections will be based on SIP. The Commission accepts this position and resulting amendments to the RIO.

Several other sections have been updated to reflect the new technical specifications and advances in technology. These include, *inter alia*:

- In the Parameter Schedule at Section 6, the term “Uniform Resource Identifier”<sup>7</sup> (URI) is added to the Trunk Groups and routing principles entry. This is an indication of a move to more digital-based network elements.

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<sup>5</sup> This is an abbreviation for Megabits per second.

<sup>6</sup> TDM is a communications process that transmits two or more streaming digital signals over a common channel. “TDM Definition”, techopedia.com, accessed February 5, 2019, <https://www.techopedia.com/definition/9669/time-division-multiplexing-tdm>.

<sup>7</sup> A URI is used to identify the location of a file or other digital resource. “URI Definition”, techterms.com, accessed October 16, 2017, <https://techterms.com/definition/uri>.

- In the Definitions section, the speed of the Carrier System has been adjusted from 155 Mbit/s to 1 Gbit/s<sup>8</sup>.
- In the JWMSIP, under the section entitled “Circuit Termination Unit Specification”, C&W has specified Cisco as a manufacturer and the product as “Cisco 3800, 3900 Series”.
- Also in the JWMSIP, under the section entitled “Protocols”, C&W has removed descriptions of protocols related to older technology and replaced them with new protocols, i.e. “The SIP signalling shall carry ISUP<sup>9</sup> signalling in accordance with the ITU-T<sup>10</sup> SIP-I specification Q.1912.5”.
- The Trunk Groups section of the JWNSIP indicates that trunk groups will now have dedicated IP addresses. This is further indication of the updated technology now in use.

### 3. The LRIC Decision

Apart from the technological aspects, the other significant development is the Commission’s Decision on LRIC Interconnection Rates 2015. In the lead up to this Decision, fixed and mobile LRIC models were developed for deriving the costs that an efficient operator would incur in providing interconnection services in a competitive market. The resulting costs for fixed and mobile termination and transit services were used to inform the rates that would be applied for interconnection purposes.

The Commission, having analysed the results of the models, determined the interconnection rates for Fixed Transit, Fixed Termination, Mobile Transit and Mobile Termination interconnection services in \$BDS<sup>11</sup> per minute, as follows:

- |                      |            |
|----------------------|------------|
| • Fixed Transit      | - \$0.010; |
| • Fixed Termination  | - \$0.011; |
| • Mobile Transit     | - \$0.011; |
| • Mobile Termination | - \$0.055. |

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<sup>8</sup> This is an abbreviation for Gigabits per second.

<sup>9</sup> ISUP stands for Integrated Services Digital Network (ISDN) User Part. This is a feature of a PSTN.

<sup>10</sup> International Telecommunications Union (ITU) Telecommunication Standardization Sector. This division of the ITU coordinates standards for telecommunications.

<sup>11</sup> This refers to Barbados Dollars.

Additionally, the rate structure for interconnection services under the LRIC is on a single per minute tariff (instead of a two-part tariff). As it relates to charges, the Draft RIO 2017 contains the following amendments:

- Section 4.5 of the Service Descriptions now states that Usage Charges include, *inter alia*, “Call Duration Charges depending on duration” as opposed to distance and duration, as previously stated.
- Section 5.5 of the Service Descriptions now states that Usage charges include, *inter alia*, “Transit Charges pursuant to the PSTN Transit Service, where applicable”. The phrase “pursuant to the PSTN Transit Service” is a new inclusion.
- Each Table of the Tariff Schedule has been adjusted to state that all charges are “per 60 secs”, as opposed to per call.

Since the RIO is the general document that sets out the terms and conditions that govern the interconnection of one telecommunications service provider or carrier with another service provider or carrier, the Commission determines that it is required to reflect all currently relevant and approved interconnection charges. In its response to the consultation, C&W made no comment on this issue.

#### **4. The Variation Agreement between C&W and Digicel**

The Commission’s 2013 Decision on the C&W/Digicel dispute led to the introduction of a feature that was not included in the RIO 2010. This is the PLMN transit charge introduced into the Interconnection Agreement between C&W and Digicel and approved by the Commission on December 9, 2014. The Mobile Transit charge, as given in the LRIC Decision, replaces the rate for the PLMN Transit charge. In the Draft RIO 2017, C&W excluded the PLMN Transit charge altogether, stating that it does not offer the PLMN Transit service to other service providers. Interconnection to C&W’s mobile network is facilitated by the PLMN Terminating Access Service. The PLMN Transit charge was only included in the C&W/Digicel Variation Agreement because this is a service supplied by Digicel to facilitate interconnection to its fixed network through its mobile network. Therefore, in that specific instance, the PLMN Transit charge was necessary and C&W was the Service Taker, not the



Service Supplier. Consequently, C&W advises that it is not appropriate to include this particular charge in its RIO.

In its response to the consultation, C&W states that the PLMN transit service is an indirect interconnection service that Digicel uses to allow interconnection to its PSTN through its PLMN. It is necessary in the C&W/Digicel Variation Agreement for this very reason. However, C&W does not offer this service. It provides direct interconnection to its PSTN via its PSTN terminating access service. It is therefore not appropriate to include the PLMN transit charge in the Draft RIO 2017. The Commission accepts this submission but determines that the charge should however be included in any subsequent interconnection agreements on an as needed basis.

### **General Comments**

The Commission considers that despite the updates and amendments in the Draft RIO 2017 its conformity to the principles contained in Section 25 of the TA remains unaffected. The fundamental precepts originally embedded in the RIO 2010 are carried over in the Draft RIO 2017. These fundamentals are fair, non-discriminatory and cost-oriented.

As it relates to all of the changes discussed above, the Commission notes that they are of merit and are prudently expressed in the Draft RIO 2017. In view of the evidence presented, the Commission considers that these changes are necessary to accurately capture and reflect the current nature of the network technology and the associated interconnection processes.

## **SECTION 5      DETERMINATION**

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The changes occurring in the Barbados telecommunications/ICT sector since the approval of the RIO 2010 indicated that an updated version is warranted. These changes include reductions in interconnection charges and advancements in network technology. The Draft RIO 2017 now accurately reflects the present state of the sector by appropriately including the aforementioned changes. Consequently, the Commission hereby approves the Draft RIO 2017 effective from April 17, 2019 and determines the following:

- a. **The Public Land Mobile Network (PLMN) Transit Charge as found in the Commission's Decision on the Interconnection Dispute between C&W and Digicel (Barbados) Limited (Digicel) of June 2013 is not required;**
- b. **The general structure of the Draft RIO 2017, inclusive of its standard terms and conditions, remains adequate;**
- c. **The rates and rate structure for interconnection charges are now congruent with those approved in the Commission's Decision on Long Run Incremental Cost (LRIC) Interconnection Rates 2015; and**
- d. **The Draft RIO 2017 adequately addresses the various technological advances in the telecommunications/information and communications technology (ICT) industry, and shall now be adopted as the RIO 2019.**

Dated this 17<sup>th</sup> day of April, 2019

*Original signed by*

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Dr. Donley Carrington  
Deputy Chairman

*Original signed by*

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Dr. Brian Francis  
Commissioner

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