The Bahamas Telecommunications Company Limited

Response To:

Preliminary Determination

Consultation on proposed changes to the Reference Access and Interconnection Offer (RAIO) published by the Bahamas Telecommunications Company Ltd.

Consultation Document
ECS 09/2016

Legal, Regulatory and
Carrier Division
May 6, 2016

Contents

1 Introduction

1.1 Background

Bahamas Telecommunications Company Ltd. ("BTC") herein provides its comments on the Preliminary Determination regarding the *Consultation on proposed changes to the Reference Access and Interconnection Offer published by the Bahamas Telecommunications Company Ltd.*, ECS 09/2016, issued by the Utilities Regulation and Competition Authority ("URCA") on 30 March 2016 (herein referred to as the "Consultation Document" or "Preliminary Determination").

As noted in the Consultation Document, the Preliminary Determination is intended to build on the Government's recently concluded process to identify the successful bidder for the second cellular mobile licence ("NewCo"). In addition, in keeping with the Electronic Communications Sector Policy, URCA indicated that it is required to take steps to "ensure that all regulatory measures necessary for cellular liberalisation, are met and fulfilled in accordance with the timetable set for such liberalisation" and "equip itself with the necessary regulatory tools required to effectively regulate a competitive cellular mobile market in the best interests of The Bahamas."

To address these requirements, the Preliminary Determination proposes that BTC be required to amend its Reference Access and Interconnection Offer ("RAIO") to include the following:

i) A cost-based mobile termination rate ("MTR") for calls terminating on BTC's cellular mobile network and originating on domestic fixed or cellular mobile networks owned by other licensed operators ("OLOs").

ii) Provisions for OLOs to interconnect directly to a suitable point of interconnection on BTC's cellular mobile network.

iii) Provisions to enable OLOs to obtain interconnection at no less than two diverse and discreet points on BTC's fixed and/or cellular mobile networks, using interconnection transport links based on Internet Protocol ("IP") supporting Session Internet Protocol ("SIP") technology.

iv) A termination service and associated cost-based termination rate for domestic and inbound international Short Message Service and Multimedia Message Service ("SMS" and "MMS").

The Preliminary Determination also states that BTC will be required to submit the amendments to its RAIO for URCA's review and approval within 45 calendar days of the date of the Final Determination resulting from this proceeding.

1.2 Overview of BTC's Submissions

At the outset, BTC provides the following summary of key issues and concerns it has with respect to URCA's proposals and supporting rationale set out in the Consultation Document:

- *Regarding URCA's proposal for the BTC RAIO to be amended to include a domestic MTR.* BTC disagrees with URCA's proposal that BTC's RAIO should be amended to include a domestic MTR at this time and that any move to CPP for fixed to mobile ("F-M") and other calls should be "market-determined" for the following reasons:

  - Any move to CPP should be the result of a justified regulatory decision based on a wide-ranging consultation to review the regulatory underpinnings and practical implementation. It is BTC's view that URCA has not consider the relative advantages and disadvantages of CPP and RPP because the Consultation Document did not include a discussion of the possible important sector-wide ramifications of a move to CPP. BTC believes that URCA's proposed "market-determined" approach would be far more complex than expected, if not largely unworkable.

  - An examination of the practical implementation aspects of any process to move to a CPP regime for F-M calls shows that there are many important regulatory matters that should be studied and determined by URCA before any move to CPP is considered, including impacts on regulated retail prices, affordability and designated USO services and issues related to numbering.

  - Nevertheless, with the objective of constructive engagement in the current consultation process, BTC has provided a preliminary proposal for the domestic MTR.

- *Regarding URCA's Direct Mobile Network Connection Proposal*: While BTC is not opposed to amending its RAIO as necessary to accommodate potential requests for direct interconnection to its mobile network, BTC maintains that any such interconnection arrangement must be technically, physically and economically feasible before being established.

- *Regarding URCA's IP/SIP Interconnection Proposal*: BTC is also not opposed to amending its RAIO as necessary to accommodate potential requests for IP/SIP interconnection links, however here again, BTC maintains that any such interconnection arrangement must be technically, physically and economically feasible before being established.

- *Regarding URCA's SMS/MMS Termination Service Proposals*: BTC is not opposed to amending its RAIO to include messaging termination with the associated rates set on a cost-oriented basis, however, BTC considers that only SMS messaging need be included in the RAIO. While BTC cannot provide proposed rates for these services at this time, it is investigating a methodology for setting the prices.

- BTC appreciates URCA's commitments to provide an environment conducive to competition and in particular mobile competition. However, it is important that expectations be managed. URCA has extended a number of invitations and proposed deadlines which we consider cannot be met realistically even with our best endeavours. We may propose alternative timelines.

Termination Rates for Domestic Mobile Calls

Section 4.1 of the Consultation Document provides the rationale for proposing that the BTC RAIO be amended to include an MTR.

The Consultation Document notes that current inter-operator wholesale arrangements for F-M calling may be characterized as "bill and keep" ("BAK"). The corresponding URCA-approved retail prices (no usage-based call charges for fixed subscribers for making the call and usage-based "airtime" charges for mobile subscribers receiving the call) is characterized as "Receiving Party Pays" ("RPP") or "Mobile Party Pays" ("MPP"). In this context, URCA cited its 2011 Decision on BTC's draft RAIO[1] wherein it argued that as long as retail F-M calls are operated on an RPP basis, then no MTR should be applied.

URCA noted that it has consulted with BTC and CBL (in its capacity as the winner of the auction for NewCo) in determining the key regulatory issues pertaining to the introduction of mobile competition. According to the Consultation Document, CBL has indicated to URCA that "it was evaluating the merits of instituting a retail tariff regime that differs from the RPP/MPP regime followed by BTC". On a preliminary basis, BTC has indicated that the current retail rates have been approved by URCA and that the pricing regime has served The Bahamas and other countries in the Caribbean and North America well. As such, BTC notes that URCA has not presented any rationale or evidence that a move to a CPP regime for this type of call is necessary or cost-beneficial for The Bahamas, or that it will result in an increase in consumer benefits or an improvement in sector performance.

The Consultation Document goes on to confirm that URCA has "not investigated the merits of CPP versus the RPP/MPP regime currently followed by BTC because it believes that such matters are best considered by the industry" and that URCA is not in the practice of mandating "to its licensees the retail charging regime they should adopt on their networks, so long as all retail charges are consistent with the requirements of the Comms Act and relevant licence conditions." In this context, URCA states its preference for a "market-determined" approach by noting that "the market will determine the most appropriate pricing practice, given that where operators offer services with alternative charging principles then end-users might naturally select the preferred approach" and that "it does foresee a possibility that licensees will move, either immediately or over time, to a CPP arrangement."

The Consultation Document concludes that given this possible outcome, URCA "considers that it has a responsibility to ensure that mobile termination services are implemented which correspond to the different retail pricing strategies that licensees might pursue." In this context and taking into account the 2013 Final Decision on SMP in call termination services,[2] URCA

---

1 URCA, *Obligations on Bahamas Telecommunications Company Ltd. under S. 116(3) of the Communications Act, 2009: Draft Reference Access and Interconnection Offer (RAIO)*, Response to Public Consultation and Final Decision, ECS 01/2011, 11 January 2011

2 URCA, *Assessment of Significant Market Power in Call Termination Services in The Bahamas under Section 39(1) of the Communications Act, 2009*, Statement of Results to Public Consultation and Final Determination, ECS 13/2013, 22 August 2013.

noted that it is now "inviting" BTC to submit, as part of its response to this Consultation Document, BTC's proposed cost-based domestic MTR, along with supporting information for URCA's review and final decision.

Consultation Question - Termination Rates for Domestic Mobile Calls. Q1. Do you agree that the BTC RAIO should be amended to include cost-based charging for domestic mobile call termination? If not, why?

BTC disagrees with URCA's proposal that BTC's RAIO should be amended to include a domestic MTR at this time for the reasons set out in Sections 2.1 to 2.3 below. Nevertheless, with the objective of constructive engagement in the current consultation process, Section 2.4 discusses the BTC RAIO service under which a domestic MTR would be provided, as well as BTC's initial proposal for the domestic MTR.

1.3 A Matter of Regulatory Policy

BTC is surprised that URCA has confirmed that it has not investigated the relative advantages and disadvantages of RPP and CPP generally, or specifically for the F-M calls in question[3]. Further, there is no evidence in the Consultation Document that URCA has given much thought either to investigating the relative advantages and disadvantages of the underlying inter-operator wholesale arrangements. While the Consultation Document does indeed mention the current BAK regime, it does not discuss the advantages and disadvantages of such a regime compared to a Calling Party Network Pays ("CPNP") regime.

BTC believes that URCA should consider the relative advantages and disadvantages of CPP/RPP and BAK/CPNP and how these regimes may impact on such important sector-wide variables as take-up, usage, pricing and other matters. BTC considers that any move to CPP/RPP and BAK/CPNP should be a matter of regulatory policy and therefore it should be the subject of a positive regulatory determination based on a wide-ranging consultation.

The Consultation Document includes a few references to the existence of and changes in RPP and CPP regimes in the Caribbean and in Europe. It is noteworthy that the Consultation Document does not mention that the USA and Canada have maintained RPP regimes for F-M calls since the advent of mobile services[4]. The USA continues to be The Bahamas' largest trading partner. In the Caribbean, while URCA noted that Barbados has maintained an RPP regime for F-M calls, it failed to note that Bermuda also continues to maintain an RPP regime for F-M calls after the introduction of mobile competition. As discussed below, given the corresponding need to introduce usage-based F-M prices to implement CPP, it is important to emphasize that countries that have traditionally bundled fixed access and unlimited local calling (such as the USA, Canada, Barbados and Hong Kong) are more likely to maintain RPP regimes

---

[3] As set out in more detail in the sections below, there are other types of calls, including M-F, F-F and M-M to which CPP or RPP may apply. However, the only type of call for which RPP currently holds in The Bahamas is F-M and therefore the only one for which a change to CPP would be applicable.

[4] While for F-M calling the USA and Canada have an RPP model, for M-M calling the regime is not strictly RPP, in that both the originating and receiving party pay a retail "airtime" charge. That is, mobile consumers pay for outgoing and incoming calls. In this context, this model for M-M calls may be referred to as both parties pay ("BPP").

because there is a long-standing consumer tradition of not having to pay for any type of local calls. This is in contrast to countries that traditionally did not include bundled unlimited local calling with monthly fixed access and hence where the transition to CPP for F-M calls was facilitated by a consumer tradition of having to pay for local calls.

1.4Practical Implementation

As noted above, page 12 of the Consultation Document includes three examples under which the market or, more specifically licensees could "move, either immediately or over time, to a CPP arrangement”. BTC discusses each of these examples in turn, with the objective of highlighting that there are a number of important regulatory matters that should be studied and determined by URCA before any move to CPP is considered. This is in contrast to URCA’s proposed “market-determined” approach.

It is noteworthy that the examples included in the Consultation Document emphasize intra-corporate calling where affiliated parties can more easily agree on maintaining the current RPP regime for F-M calls, or moving to a CPP regime. The possibilities of disputes between affiliated parties would be non-existent. However, by not emphasizing inter-corporate calling between non-affiliated parties, URCA appears to downplay the possibilities of disputes and does not address how any such resulting disputes would be resolved.

Equally important as highlighted in Section 2.3, there is no discussion in the Consultation Document of a number of regulatory and operational matters that would have to be analysed before any move to CPP is duly considered, including in relation to retail price changes, how a move to CPP could be expected to affect affordability and designated USO services and issues related to numbering.

1.4.1 URCA CPP Transition Example 1

BTC discontinues its policy of RPP/MPP for calls originated on domestic networks (including BTC's fixed network terminating on BTC’s mobile network).

BTC understands this example to refer to the current retail calling regime that holds for Bahamas in relation to F-M calling.

Given the existing multi-operator fixed service environment and the future two-operator mobile service environment, there are many possible operator pairs involved in an F-M call. Following on the Consultation Document lead, and for illustrative purposes only, the discussion below focusses on a two operator fixed market (“BTC-F” and “SRG”) and a two operator mobile market (“BTC-M” and NewCo). Under this model there are two possible F-M operator pairs discussed below (the other two possible operator pairs are discussed under Example 2 below):

1.4.1.1 A BTC-F to BTC-M Call

Given the long-standing and URCA-approved bundling of subscription and unlimited local calls for current fixed line services, a fixed subscriber does not currently pay a specific usage-based price for making an F-M call. Hence, BTC receives no incremental revenue from that fixed subscriber for that call. On the other hand, the BTC mobile subscriber receiving that call is charged an URCA-approved retail “airtime” and hence, BTC does receive some incremental revenue from the mobile subscriber for receiving an F-M call.

In this context, if a domestic MTR where to be included in BTC's RAIO and BTC decided to move to a CPP retail charging regime for this particular type of F-M call, it would have to seek URCA approval for amendments to two rates, as discussed below.

- First, BTC would have to seek approval to amend the current fixed line service price with the objective of recovering the intra-corporate loss of revenue required to pay for the new domestic MTR. There are a number of options in this regard. One option would be to "unbundle" from the current unlimited local calls only the local F-M calls under question. Under this approach, BTC fixed line customers would be charged a usage-based charge for outgoing calls to mobile subscribers that would take into account the newly-established MTR. Such a usage-based charge would be additional to the monthly subscription charge (which may or may not need to be adjusted). Having unbundled a subset of calls, another option is to "unbundle" all local calls originated from fixed subscribers. Such usage-based charges would be additional to the monthly subscription charge (which may or may not need to be adjusted). Yet another option would be to increase the current price of the "bundled" fixed line service to take into account the newly-established MTR.
    - BTC considers that any of these options would have very significant consequences for BTC and its fixed subscribers. As noted above, as in other countries that have maintained RPP for F-M calls, fixed subscribers in The Bahamas have a long-standing consumer tradition of not having to pay for any type of local calls. BTC fully expects that URCA would undertake a full regulatory process to review and approve any such changes. Without prejudice to the type of option that BTC would propose, BTC expects that any such retail price application process would require a number of months for URCA to review and approve, and also take into account that the fixed service is designated as a USO service. Indeed, BTC would expect that URCA may also want to consult with the public on such an important price application.

- Second, BTC would have to seek approval to amend current mobile services prices. Specifically, BTC would remove any airtime charges associated with the receipt of any incoming calls from BTC fixed customers. Because this amendment would result in the elimination of a tariff item (the reduction to zero), BTC would expect that URCA would deal with this application relatively quickly.

1.4.1.2 A BTC-F to NewCo Call

This specific type of call differs from the above in that it involves inter-corporate calling between non-affiliated parties. Under the current URCA-approved retail rates, there is no wholesale inter-operator payment for this type of call – it is effectively treated as BAK between sending and receiving networks[5]. A move to CPP for this particular type of call is not discussed specifically in the Consultation Document. BTC considers this omission as a short-coming and an indication of the complexity associated with a move to CPP.

---

[5] It is noteworthy that the situation in Bahamas is not strictly speaking BAK in that the sending network does not "bill" the fixed subscriber any specific usage-based rate for making that call.

Under URCA's proposed "market-determined" approach, the two operators would have to decide whether to maintain the current BAK arrangements or whether to switch to a CPNP regime where the originating network makes a payment to terminate a call on the receiving network. However, the Consultation Document appears to downplay the possibilities of disputes and does not address how any such resulting disputes would be resolved. Would the general dispute resolution provisions in the BTC RAIO hold? BTC considers this unlikely because it would be NewCo that is terminating this call.

Dispute resolution provisions aside, BTC would be concerned that one of the parties would act unilaterally. Under this particular scenario, NewCo could unilaterally decide, either on commercial launch or afterwards, to not charge its customers any airtime for incoming calls and thus attempt to charge a domestic MTR to BTC to terminate F-M calls. Such a unilateral move from BAK to CPNP on the wholesale side, before BTC seeks or receives approval from URCA to amend its fixed service prices to be able to recover from its fixed subscribers the additional incremental revenue that it would be required to pay NewCo in the form of a NewCo domestic MTR, would be highly prejudicial to BTC. In effect, if it could not amend its fixed service prices as discussed above, it would be losing money on every F-M call to NewCo. As discussed above, any such application to review its fixed service prices would be a multi-month process and would also likely have to take into account the question of affordability and other provisions related to designated USO services (see below for further discussion).

1.4.2 URCA CPP Transition Example 2

SRG introduces retail charges (CPP) on its own fixed line customers for making fixed-to-mobile calls (i.e., CPP on SRG's fixed network)

As above, BTC understands that this example refers to the current retail calling regime that holds for Bahamas in relation to fixed to mobile (F-M) calling and therefore this example covers the two remaining F-M operator pairs:

1.4.2.1 An SRG to NewCo Call

This would constitute an intra-corporate call between two affiliated networks. Similar to the BTC-F to BTC-M call discussed above, there are no non-affiliated network operators involved and hence the decision to maintain BAK or move to CPNP is ultimately an internal one.

SRG's fixed retail prices are not regulated by URCA and hence SRG does not need to seek approval to amend its fixed service offer to accommodate any corresponding move to CPP for SRG to NewCo calls.

URCA has not indicated whether and when it plans to assess NewCo for SMP in the retail mobile service market. In any event, BTC considers it unlikely that NewCo's retail prices would be regulated at commercial launch or soon thereafter. Hence, in this period, NewCo would not need to seek approval to amend its mobile prices (to zero) to accommodate a move (or launch) to CPP for SRG to NewCo calls.

1.4.2.2 An SRG to BTC-M Call

Under the current BAK wholesale regime there would be no inter-operator payment between SRG and BTC for this type of call. The SRG fixed subscriber making the call does not pay any specific usage-based rate for making the call; BTC does charge its mobile subscriber an URCA-approved retail "airtime" charge for receiving the call.

A move to CPP for this particular type of call is not discussed specifically in the Consultation Document. As in the case of the other inter-operator call discussed above, under URCA's proposed "market-determined" approach, the two operators would have to negotiate whether to maintain the current BAK arrangements or whether to switch to a CPNP regime. As above, however, the Consultation Document appears to downplay the possibilities of disputes and does not address how any such resulting disputes would be resolved.

The possibility of one of the parties acting unilaterally also holds under this type of calling. However, the consequences of such a move would likely not be as prejudicial. If, for instance, BTC decided to stop charging its mobile customers to receive calls and thus attempted to charge a domestic MTR to SRG, SRG could amend its fixed service prices to recover from its fixed subscribers the additional incremental termination fees that it would be required to pay BTC-M. SRG would not have to seek URCA approval for such amendments because its retail rates are not regulated.

1.4.3 URCA CPP Transition Example 3

The second cellular mobile operator implements CPP for its own cellular mobile customers for making off-net mobile calls and sending SMS messages to BTC's mobile customers (i.e., CPP on the second mobile network).

BTC understands that this example relates to mobile to mobile (M-M) and mobile to fixed (M-F) calling. BTC notes that the current URCA-approved retail rates already incorporate a CPP regime for both of these types of calling and hence the potentially disruptive changes and disputes highlighted above would not be applicable in this case.

1.5 Related Regulatory Matters

The previous section identified a number of regulatory matters that a move to CPP for F-M calls would have to take into account.

1.5.1 Retail Prices

As discussed above, for a number of calling scenarios, the move to CPP for F-M calls would require BTC to submit applications to URCA to amend the prices of a number of retail services. There is no evidence in the Consultation Document that URCA has considered how this retail price application process would be accommodated or be influenced by any agreement by the industry to move from BAK to CPNP for F-M calling.

BTC is particularly concerned about different incentives between BTC and SRG/NewCo to reach any agreement because of the regulatory asymmetry between the two corporate entities. Ultimately, because SRG retail fixed services and NewCo's retail mobile services prices will likely not be regulated by URCA, these two parties have commercial flexibility to amend their retail prices to accommodate a move to CPNP. In contrast, BTC's mobile and fixed service prices continue to be regulated by URCA and hence BTC would have to seek approval for their modification. This could constitute a multi-month process that could prejudice BTC under some circumstances, as detailed above.

Given this uncertainty and potential prejudice to BTC, BTC submits that it would not be prudent for URCA to adopt its proposed "market-determined" approach. BTC strongly encourages URCA to undertake a specific consultation process that would consider the relative advantages and disadvantages of CPP/RPP and BAK/CPNP and the related regulatory matters, including in relation to the amendment of price-regulated services.

1.5.2 Affordability and USO

As noted above, a move to CPP for F-M calls would result in BTC having to seek approval to change its fixed services prices. Any such application would have to be reviewed by URCA, including with respect to Part K of the "Pricing Rules"[6] which relate to a "Price changes for Price Regulated Services which form part of the Universal Service Obligation (USO)".

BTC is the designated universal service provider ("USP") with respect to basic telephony services, which is referred to as follows in the Comms Act:

> Basic telephony services (inter- and intra-island fixed voice) to all populated areas.

In its USO Decision,[7] URCA further clarified the definition of fixed telephony services as:

> A system of telecommunications in which telephonic equipment is employed in the transmission of speech or other sound between points, with or without the use of wires."

URCA further noted that these "services are remunerated with rental, installation fees and call rates." The Pricing Rules set out a series of additional provisions related to permanent price increases for Price Regulated USO services. In addition to following the standard requirements in Paragraphs 6 to 22, the SMP operator must show that the proposed new price remains affordable.

In summary, BTC considers it likely that a move to CPP for F-M calls under URCA's proposed "market-determined" approach would likely trigger such a rate application. In this context, of uncertainty and potential prejudice to BTC, BTC submits that it would not be prudent for URCA to adopt such "market-determined" approach. BTC strongly encourages URCA to undertake a specific consultation process that would consider the relative advantages and disadvantages of CPP/RPP and BAK/CPNP and the related regulatory matters, including in relation to the question of affordability of any designated USO services.

1.5.3 Numbering

A move to CPP for F-M calls would require either a change in the numbering plan or a consumer education program, or perhaps other measures related to numbering. The reason for this is that currently fixed subscribers have unlimited free local calling, regardless of whether the called number is on a mobile or fixed network. As discussed above, a move to CPP for F-M calls could mean the establishment of a specific usage-based charge for fixed subscribers to call mobile numbers. With a view to price transparency and consumer protection, it would be important for fixed consumers to easily differentiate these charged calls from the free calls to fixed networks.

---

6 URCA, *Regulation of Retail Prices for SMP Operators – Rules* ECS 06/2014, 16 April 2014

7 URCA, *Framework for the Clarification and Implementation of Existing Universal Service Obligations (USO) under Section 119 and Schedule 5 of the Communications Act 2009 - Statement of Results and Final Decision*, ECS 01/2013, 23 January 2013

The Bahamas National Numbering Plan ("BNNP")[8] recognizes the importance of consumers being able to recognize numbers for which they might incur charges while calling within their own exchange area:

> A set of Easily Recognizable Codes (ERC) have been allocated for easy customer recognition of services accessed within their own exchange area, for which they might incur charges.

As noted above, one result of a move to CPP for F-M calls would be the introduction of specific retail usage charges for F-M calls so that fixed subscribers would indeed incur charges while making local calls. For instance, while the majority of CO codes under the 3XX level have been assigned to BTC fixed services, four have been assigned to BTC mobile services (357, 359, 375 and 395). While most 4XX CO codes are assigned to mobile service, one has been assigned to fixed, a situation that also applies to the 5XX CO codes. While the 6XX has been designated to Fixed Services, two blocks have already been assigned to mobile services.

Without changes to the BNNP or a consumer education campaign, a move to CPP for F-M calls could result in consumers incurring charges for unknowingly calling mobile networks. Specifically, even if fixed subscribers generally have the knowledge that "most" 3XX codes correspond to other fixed subscribers, it may not be reasonable to expect consumers to remember that if they were to call numbers in CO codes 357, 359, 375 and 395 they would incur additional charges. Such charging would be disruptive and may result in consumer backlash and complaints.

In this context, BTC strongly encourages URCA to undertake a specific consultation process that would consider the relative advantages and disadvantages of CPP/RPP and BAK/CPNP and the related regulatory matters, including in relation to any numbering-related matters.

1.6 Amendments to BTC RAIO

For the reasons set out in Sections 2.1 to 2.3, BTC thinks URCA's proposal is premature in that BTC's RAIO should be amended to include a domestic MTR at this time. Nevertheless, with the objective of constructive engagement in the process, and with a view to compliance with URCA's "invitation" to submit a draft domestic MTR, this Section discusses the BTC RAIO service under which a domestic MTR would be provided, as well as BTC's initial proposal for the domestic MTR.

1.6.1 New RAIO Service

As noted above, BTC is concerned that any move to CPP for the F-M service could be prejudicial to BTC unless BTC is able to correspondingly amend its fixed service prices. As noted above, this application process could be a multi-month process. With this in mind, one of the key provisions that BTC would insist be included in the services description of any new CPP fixed to mobile service to be included in the BTC RAIO is that the offering of such service be conditional on BTC receiving approval from URCA to amend the corresponding fixed service prices.

---

[8] URCA, *The Bahamas National Numbering Plan*, ECS 17/2011, 12 August 2011.

1.6.2 MTR to be included in BTC RAIO

The Consultation Document notes that the 2013 Final Determination on SMP in Call Termination Services[9] imposed an obligation on BTC to establish a cost-based domestic MTR when mobile competition is introduced.

Without prejudice to the arguments made above by BTC regarding the inappropriateness of including a domestic MTR at this time in the BTC RAIO, BTC offers the following comments on and proposal for an interim cost-based domestic MTR.

First, BTC notes that its current cost accounting results could potentially be used as a starting point for setting a domestic MTR. However, following this approach would require reviewing the level of the current international MTR at the same time. BTC notes that URCA has considered applying an efficiency adjustment to costs estimates derived from BTC's cost accounting model. In this respect, URCA conducted a high-level, cost efficiency study for BTC in 2012 based on data and information that is now over five years old.[10] In any event, BTC considers the results of that exercise to be outdated and, more importantly, of highly questionable value. Therefore, conducting a similar exercise now or developing a more appropriate efficiency adjustment methodology would be a lengthy and costly exercise.

Second, BTC notes that the current international MTR was ultimately set by URCA in 2012 based on a benchmarking exercise which included a number of Caribbean as well as other international jurisdictions. Using the results of that exercise, a benchmark international MTR was set by URCA for 2012/13 (6.03 BSD cents/minute) and further glide-path reductions, intended in part to reflect efficiency gains, were applied for 2013/14 and 2014/15. The resulting international MTR rate, which is in effect today, is 4.61 BSD cents/minute. It is important to note the benchmark sample MTRs used by URCA for this exercise were all domestic MTRs, not necessarily international MTRs per se. Consequently, BTC considers that the existing 4.61 BSD cents/minute international MTR could be adopted as an interim domestic MTR if setting such a rate at this time is determined to be appropriate.

The MTR could be updated, but this would require that a new benchmarking exercise be undertaken. BTC considers that this would also be a lengthy exercise and, moreover, not necessary at this time since URCA combined glide-path reductions with the findings of its previous benchmarking exercise.

1.6.3 Symmetry of MTR for NewCo

On a related matter, BTC notes that that URCA stated in the Consultation Document that it does not consider it appropriate to examine the merits of requiring NewCo to charge the same MTR as BTC – i.e., the question MTR symmetry. It added that it must first determine whether NewCo

---

[9] URCA, *Assessment of Significant Market Power in Call Termination Services in The Bahamas under Section 39(1) of the Communications Act, 2009*, Statement of Results to Public Consultation and Final Determination, ECS 13/2013, 22 August 2013.

[10] URCA, *URCA Consultation: BTC Cost Efficiency Study*, Statement of Results to Public Consultation and Final Decision ECS 20/2012, 27 July 2012.

possesses SMP with respect to call termination on its mobile network before this question can be considered. BTC finds this aspect of URCA's Preliminary Determination puzzling and one that creates unnecessary and considerable uncertainty.

First, in BTC's submission there is no reason nor need to conduct an SMP assessment of call termination on NewCo's mobile network (before or after it is in operation). The results of URCA's 2013 Final Determination on SMP in Call Termination Services were clear – all licensed network operators were found to possess SMP with respect to call termination services, irrespective of technology. There is no reason whatsoever to believe that CBL may not possess SMP with respect to its mobile network once it is in operation without reversing many if not all of URCA's conclusions in its 2013 SMP determination. At best, NewCo should be asked to justify why URCA's 2013 call termination service SMP determination would not apply in the case of its mobile network. A full consultation is not required to review this question.

Second, in 2014, URCA also considered in detail arguments for symmetric versus asymmetric fixed termination rates, and concluded that termination rates should be symmetric across operators.[11] There is no reason to believe that a different conclusion would be reached in respect of MTRs, especially in view of the fact that the current MTR is based on an international benchmarking exercise adjusted expected efficiency gains. As a result, in effect, the current MTR is a benchmark rate that should equally apply to any and all mobile network operators in the market.

As a wholesale pricing principle, all call termination rates should be symmetric irrespective of technology and operator. Any party who asks URCA to deviate from this principle should shoulder the burden of proof justifying a change in that policy.

2 Direct Connectivity to BTC's Mobile Switch

2.1 URCA's Proposal and Related Rationale

In Section 4.2 of the Consultation Document, URCA noted that in its 2011 Final Decision on BTC's Draft RAIO,[12] it determined that direct connectivity to BTC's mobile switch was not critical to fixed line competition. It also stated that URCA did not mandate BTC to provide direct interconnection with BTC's mobile switch, in part, because at the time it anticipated there would only be relatively low interconnection traffic volumes, thus making direct interconnection less economically feasible. However, URCA added that it also recognised at the time that further revisions to BTC's RAIO may be required in the future to, among other things, address the changing needs and further liberalisation of the sector.

[11] URCA, *Wholesale Fixed Call Termination Price Control for SMP Licensees*, Statement of Results to Consultation and Final Determination, ECS 12/2014, 20 June 2014

[12] URCA, *Obligations on Bahamas Telecommunications Company Ltd. under S. 116(3) of the Communications Act, 2009: Draft Reference Access and Interconnection Offer (RAIO)*, Response to Public Consultation and Final Decision, ECS 01/2011, 11 January 2011.

URCA indicated in the Consultation Document that with the coming launch of NewCo, it is now of the preliminary view that direct connectivity to BTC's mobile switch may be appropriate and required to achieve fair and efficient entry in the cellular mobile market. URCA also indicated that it is of the preliminary view that access to BTC's mobile switch would be a reasonable obligation placed on BTC pursuant to Condition 11 of BTC's Licence and section 40 of the Comms Act.

In support of its Preliminary Determination, URCA claimed that with the expected increase in interconnection traffic to arise from mobile competition, it would now likely be economically feasible for BTC to offer direct connectivity to its mobile switches. In addition, URCA suggested that it is commonplace for an entrant to be able to connect directly to an incumbent's mobile network and believes that the situation should not be any different in The Bahamas. Further still, URCA noted that BTC has direct interconnection links between its fixed and cellular mobile networks and, because of this, other fixed and/or cellular mobile licensees should have the same interconnection opportunity to ensure a level playing field.

On this basis, URCA stated that it considers that it is now an appropriate time for BTC to amend its RAIO to include direct points of interconnection between the mobile switch of BTC and other licensees providing fixed and/or mobile communication services in The Bahamas in order to ensure suitable conditions for efficient mobile competition.

Consultation Question - Direct Connectivity to BTC's Mobile Switch
Q2. Do you agree that the BTC RAIO should be amended to include direct Points of Interconnection (POI) between BTC's mobile switch and other networks providing fixed and/or mobile communication services in The Bahamas? If not, why?

2.2 BTC Response

BTC considers that its current RAIO provides the necessary provisions and related processes that would allow NewCo to apply for direct interconnection to BTC's mobile network. It is currently reviewing its RAIO to determine what specific amendments may necessary to accommodate direct interconnection to its mobile network, such as including the proposed location of a potential point(s) of interconnection ("POI").

That said, BTC is also of the view that the technical, physical and economic feasibility of any proposed or requested new POIs remain critical considerations. The costs of establishing a new POI(s) depend on the technical and physical requirements of the proposed facilities, among other things, but are generally significant in magnitude for both interconnecting operators. Consequently, the economic feasibility of establishing a new POI must be evaluated, especially in the cases where there are existing POIs in place that provide the necessary means and capacity to effectively and efficiently handle existing and anticipated traffic volumes between the operators. Typically a significant increase or change in interconnection traffic volume or mix would be required before a new POI(s) would be justifiable from an economic perspective.

BTC acknowledges that following the launch of NewCo's cellular mobile service, interconnection traffic between BTC and NewCo will change significantly over the course of the following months and years. For the near and intermediate term, however, BTC considers that the existing POIs can continue to provide effective and efficient means to handle interconnection traffic between BTC's and NewCo's networks. Direct interconnection between BTC's and NewCo's mobile networks will likely become economically feasible once mobile subscriber interconnection traffic volume grows sufficiently. At that time, direct interconnection would likely be feasible for both operators.

The same considerations would also apply in the case of any licensed fixed line communications service operators seeking to interconnect directly to BTC's mobile network. BTC considers that the economic feasibility of any such interconnection arrangement(s) would need to be taken into account. Indeed, with mobile competition, the number of BTC's mobile subscribers can be expected to decline as it loses market share to the second mobile operator and, therefore, traffic from other fixed line operators' subscribers to BTC mobile subscribers would also be expected to decline rather than increase. Consequently, just as URCA found in its 2011 Final Decision on BTC's Draft RAIO, direct connectivity to BTC's mobile network would not be critical to fixed line competition, especially in view of the fact such traffic would also likely be decreasing. Nonetheless, under the provisions in BTC's existing RAIO, a licensed fixed line operator could apply for direct interconnection to BTC's mobile network and such requests could be accommodated where it is found to be feasible from technical, physical and economic perspectives.

Lastly in this respect, BTC considers the two other rationales URCA offers in support of its proposal to effectively require direct interconnection to BTC's mobile network to be misplaced – i.e., namely that (i) such arrangements are common elsewhere and (ii) the proposal would ensure a level playing field since BTC directly interconnects its own fixed and mobile networks.

First, direct interconnection to an incumbent's fixed and mobile networks by all fixed and/or mobile entrants is not necessarily commonplace. No supporting evidence was provided by URCA for this sweeping claim. For instance, BTC understands that entrants in all five the Eastern Caribbean Telecommunications Authority (ECTEL) Member States interconnect to the incumbent's mobile network via its fixed network switch. In any case, the nature and extent of incumbent and entrant network interconnection arrangements vary from one country to the next. As well, specific interconnection arrangements in any given country ultimately depend on a variety of historical factors relating to, among other things, the timing and nature of the market liberalisation in each case.

Second, direct interconnection between every operator's networks is not necessary to ensure a level playing field as long as there are efficient and effective transiting alternatives, which is the case in The Bahamas as in most other jurisdictions. Moreover, with the growing trend from legacy TDM to IP/SIP based interconnection, the issue of which switches are interconnected will become more or less irrelevant as the point(s) of physical interconnect increasingly take place at the IP level.

3 Interconnection via IP/SIP Interconnection Links

3.1 URCA's Proposal and Related Rationale

In Section 4.3 of the Consultation Document, URCA noted that under the terms of BTC's current RAIO, OLOs are interconnected to BTC's fixed network using the TDM/SS7 interconnection links for the transport of traffic between their respective networks. URCA also noted that BTC's current RAIO allows for IP interconnection links to be made available to OLOs upon request, subject to technical and economic feasibility. However, URCA added that no IP/SIP interconnection links have been established between BTC's and OLOs' networks to date.

URCA indicated in the Consultation Document that it considers that the enabling components in BTC's RAIO need regular updating to take account of technological changes in BTC's network architecture. While URCA recognised that BTC's NGN deployment may not yet be complete throughout The Bahamas (and therefore could restrict BTC's ability to offer IP interconnection links on some islands), it stated that it understands that BTC currently has NGN infrastructure deployed on some islands (e.g., New Providence and Grand Bahama). Consequently, URCA indicated that it is of the preliminary view that at a minimum BTC has the capacity to offer IP/SIP interconnection in such locations and should now make such links available whenever requested and without undue delay.

URCA added that on any island where BTC maintains that IP/SIP interconnection is unfeasible and declines to offer the same, BTC should be required to demonstrate to URCA's satisfaction that such interconnection is technically unfeasible. Lastly, URCA also clarified that is not requiring BTC to discontinue provisioning of TDM/SS7 circuits from its RAIO.

Consultation Question – Interconnection via IP/SIP Interconnection Links
Q3. Do you agree that BTC's RAIO should be amended to provide IP Interconnection links upon request and without undue delay? If not, why?

3.2 BTC Response

BTC considers that its current RAIO provides the necessary provisions and related processes that would allow another licensed operator to apply for IP/SIP interconnection with BTC. Nevertheless, BTC is currently reviewing its current RAIO to determine what specific amendments may necessary to explicitly accommodate IP/SIP interconnection.

In this respect, BTC is of the view that the technical, physical and economic feasibility of any proposed or requested new interconnection arrangements, including IP/SIP interconnection, are critical considerations. To the extent that a request for IP/SIP interconnection was found by BTC to be technically unfeasible, it would be fully prepared to explain the basis for that finding to both the operator requesting the link and, as proposed, URCA.

Lastly on this issue, BTC would like to note that it has in fact undertaken a process together with Systems Resource Group (SRG) to test the feasibility of IP/SIP interconnection between BTC's and SRG's networks.

4 SMS/MMS Termination Service

4.1 URCA's Proposal and Related Rationale

In Section 4.4 of the Consultation Document, URCA noted that in its 2013 SMP Review of Call Termination Markets,[13] it found that BTC possessed SMP in SMS/MMS termination on its cellular mobile network. URCA further stated at the time when mobile competition is introduced BTC should amend its RAIO to include SMS/MMS termination with cost-based rates.

As a result, in its Preliminary Determination, URCA has proposed that BTC amend its RAIO to give full effect to URCA's 2013 Review of Call Termination Markets decision to ensure suitable conditions for efficient mobile competition. URCA added that the contemplated amendment should include a description of the termination service for SMS/MMS and the associated cost-based rates for domestic and inbound international SMS/MMS services which, for the avoidance of doubt, URCA added should be the same, assuming the domestic and inbound international services use the same network elements in the same proportions.

URCA also requested that in its response to this consultation, BTC should also submit all information and evidential support for the proposed cost-based rate as well as a detailed description of the technical specifications for the service to be offered.

Consultation Question – SMS/MMS Termination Service and related rates Q4. Do you agree that the BTC RAIO should be amended to include mobile message termination service and associated cost-based charging for the service? If not, why?

4.2 BTC Response

BTC is not opposed to amending its RAIO to include, as proposed, messaging termination with the associated rates set on a cost-oriented basis.

However, BTC questions URCA's proposal to treat SMS and MMS as effectively equivalent messaging services. The interworking requirements are very different for the two services. SMS interworking can be handled relatively easily between two mobile network operators, whereas MMS interworking is far more complex and typically involves a third party network. In addition, SMS and MMS messaging are both declining services, and especially so in the case of MMS which has been all but replaced by messaging apps such as WhatsApp, Snapchat and BBM, among others. Consequently, BTC considers that MMS messaging need not be included in its RAIO.

BTC is currently in the process of gathering information for and preparing draft service descriptions for SMS and MMS interworking services that could be included in BTC's RAIO.

---

13 URCA, *Assessment of Significant Market Power in Call Termination Services in The Bahamas under Section 39(1) of the Communications Act, 2009*, Statement of Results to Public Consultation and Final Determination, ECS 13/2013, 22 August 2013.

However, at this time, BTC is not in a position to provide proposed draft amendments to its RAIO in this regard.

BTC also notes that setting a cost-based rate for SMS/MMS termination is not a straightforward matter. BTC's existing cost accounting model does not include SMS/MMS termination as a separate wholesale service. BTC is currently reviewing its cost accounting model to determine if and how modifications could be made in order to provide reasonable estimates of the costs of these wholesale services.

BTC notes that benchmarking could provide an alternative approach for setting SMS and/or MMS rates. BTC is currently in the process of collecting publicly available information on such rates for the Caribbean region. For instance, based on a long-run incremental cost model approach, ECTEL approved the following maximum SMS termination rates for ECTEL member states, which on average amounted to USD$0.014 in 2009:[14] ECTEL did not examine or set MMS termination rates at the time.

ECTEL Member State	**ECTEL Approved Maximum SMS Termination Rate (2009)**	
	XCD	**USD***
Dominica	0.0482	0.018
Grenada	0.0395	0.015
St Kitts and Nevis	0.0352	0.013
Saint Lucia	0.0300	0.011
St Vincent and the Grenadines	0.0329	0.012
Average	**0.0372**	**0.014**

** Converted from XCD to USD using www.xe.com exchange rates.*

Information on SMS termination rates is available for international jurisdictions such as the European Union (EU) countries. For instance, the Body for European Regulators of Electronic Communications (BEREC) recently issued a report on termination rates in the EU for 2015. The BEREC report shows that SMS termination rates vary widely across EU countries – i.e., from 0 to 5.60 eurocents. The weighted average rate for the EU is 2.29 eurocents (USD$0.026).[15] The low-end zero-rated fee pertained to jurisdictions with bill & keep SMS termination arrangements. BEREC does not report information on MMS termination rates.

BTC notes that it may also be possible to establish a SMS/MMS termination rate cap on a retail minus cost basis. BTC is currently exploring this option as well.

Lastly, while URCA has proposed that it set a maximum SMS/MMS termination rate for tariff purposes, BTC submits that interconnecting carriers should be permitted to negotiate a lower mutually agreeable rate where possible.

---

14 ECTEL, Implementation of Interconnecting Rates, see http://www.ectel.int/index.php/regulatory-framework/interconnection/implementation-of-interconnecting-rates.

15 BEREC, *Termination rates at European level: July 2015*, BoR (15)211, 7 December 2015. Translated into USD using current EUR-USD exchange rate at from www.xe.com.

6. CONCLUSION

It is clear that there are a number of important costs and market issues that need to be considered regarding the proposed amendments to the RAIO. We would recommend that the deadline to respond to responses be postponed until July 10, 2016 to allow the sector an opportunity to thoroughly consider all aspects of these proposed changes and the associated ramifications, in the interest of making cost effective decisions which at the end of the day benefit all consumers. We also suggest that the submission of amendments to the RAIO should be extended to 90 days.

Also, BTC would recommend that URCA establishes a task force so that each party can understand the expectations of the other. At this point, it appears that URCA may be anticipating the needs of a two mobile operator model, without being aware of the realistic needs and limitations of an interconnection arrangement such as this.

Reservation of Rights

BTC has addressed the issues but reserves the right to comment at this time on all issues and states categorically that the decision not to respond to any issue raised on this Consultation in whole or in part does not necessarily represent agreement in whole or in part with the URCA's position, nor does any position taken by BTC in this consultation mean a waiver of any of BTC's rights in any way. BTC expressly reserves all its rights.