



**OBLIGATIONS ON BAHAMAS
TELECOMMUNICATIONS COMPANY LTD.
UNDER s. 116(3) OF THE
COMMUNICATIONS ACT, 2009:**

***DRAFT REFERENCE ACCESS AND
INTERCONNECTION OFFER (RAIO)***

**CONSULTATION DOCUMENT
ECS 22/2010**

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Response Date – 19th October 2010

UTILITIES REGULATION & COMPETITION AUTHORITY

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1 Introduction

Under the terms of s. 116(1) and Schedule 4 of the Communications Act (“the Comms Act”), Bahamas Telecommunications Company Ltd. (BTC) is presumed to have significant market power (SMP) in the following markets:

- the provision of fixed voice; and
- the provision of mobile voice and mobile data services.

Under the terms of s. 116(2) of the Comms Act, URCA is empowered to issue regulatory measures specifying the obligations of electronic communications licensees in the Commonwealth of The Bahamas presumed to have SMP with the objective of encouraging, promoting and enforcing sustainable competition.

This public consultation document is issued, inter alia, under the terms of s. 11(1), s. 13(1) and s. 116 of the Comms Act, and contains URCA’s preliminary views and proposed recommended amendments to the draft Reference Access and Interconnection Offer (“RAIO”) published by BTC pursuant to the Final Decision by URCA on Obligations Imposed on Operators with Significant Market Power (SMP) on 22nd April 2010.¹ BTC and third parties are welcome to respond to this document.

The rest of the introduction provides:

- an overview of the regulatory framework and process to date (Section 1.1);
- an overview of the scope of URCA’s review of the draft RAIO (Section 1.2);
- an explanation of how to respond to this consultation (Section 1.3); and
- an overview of the structure of the remainder of this document (Section 1.4).

1.1 Regulatory Framework and Process to date

As part of the SMP obligations imposed on BTC by URCA, BTC is required to prepare and publish a Reference Access and Interconnection Offer (RAIO), setting out the terms and conditions upon which it will offer access and/or interconnection to Other Licensed Operators (OLOs) in The Bahamas.² This RAIO must be prepared, inter alia, in accordance with s. 40(1)(b) of the Comms Act, Condition 40 of BTC’s licence, and the Access and Interconnection Guidelines (‘the Guidelines’) published by URCA in April 2010, alongside the Final SMP Decision. BTC is further required to submit the RAIO in draft form to URCA for its review and approval.

Below is an overview of the main milestones in the process so far:

¹ See ECS 11/2010 available on URCA’s website at www.urbahamas.bs.

² URCA, “*Obligations imposed on operators with Significant Market Power: Final Decision*”, 22 April 2010 (ECS 11/2010)

- 22nd April 2010 - Publication of URCA's Final Decision on the Types of Obligations imposed on, among others, BTC under s.116 (3) of the Comms Act. In the Final Decision, URCA set out the list of products that were found to be in the high-level SMP markets and the list of specific *ex ante* obligations to which the SMP operators must adhere.³ This included a number of interconnection services, and enabling products that must be provided by BTC through an approved RAIO. At the same time, URCA also published Final Guidelines for Accounting Separation for BTC⁴, Final Guidelines for Access and Interconnection⁵, and Regulation of Retail Prices for SMP Operators – Rules ("Retail Pricing Rules").⁶
- BTC submitted its draft RAIO to URCA (excluding the complete tariff schedule) on 31st May , with the draft tariff schedule submitted on 15th June , 2010.
- Following an initial completeness check of the draft RAIO by URCA⁷, BTC then published its revised draft RAIO on its website on 2 July 2010.⁸
- BTC held an industry workshop on 21st July 2010 to present the draft RAIO to interested parties.

The publication by BTC of a draft RAIO marks a significant step in the development of a transparent, non-discriminatory and competitive market for electronic communications in The Bahamas. Once it is approved by URCA, the RAIO will provide a framework through which competing operators can negotiate agreements for access and/or interconnection with BTC and thus promote the development of an open and competitive electronic communications market so that consumers, over time, have a choice of providers and services. Without a suitable RAIO in place, efficient and effective competition is unlikely to emerge in the market.

It is therefore important for URCA to be involved fully in the review of the draft RAIO and, following consultation with all interested parties, to identify those parts of the current draft RAIO which should be amended to ensure a fit-for-purpose document is put in place by BTC.

The draft RAIO is designed to facilitate access and interconnection between BTC and Other Licensed Operators (OLOs) of fixed networks and services. As competition develops in the sector (through, for example, the award of additional mobile licenses), URCA would expect the RAIO to be updated to ensure that it continues to meet the requirements of the industry and promotes efficient and effective competition to the benefit of The Bahamas.

³ In this consultation, URCA uses the phrase "high-level SMP market" to refer to the markets listed in Section 116 of the Comms Act.

⁴ ECS 12/2010 available on URCA's website at www.urbahamas.bs.

⁵ ECS 14/2010 available on URCA's website at www.urbahamas.bs.

⁶ ECS 15/2010 available on URCA's website at www.urbahamas.bs.

⁷ The purpose of the completeness check was to ensure that the draft RAIO is consistent with the Final Decision, the Guidelines, the Comms Act, BTC's licence conditions and other documents

⁸ Available at www2.btcbahamas.com/features/interconnection/notice/index.php.

1.2 The Scope of URCA's Review

The Guidelines describe the minimum expected contents for BTC's RAIO and establish some core principles which should be reflected in the RAIO. As a first stage, therefore, URCA's review assessed the extent to which the draft RAIO has complied with the Guidelines.⁹ For example, this included an assessment of whether the draft RAIO is complete and covers all the topics (see Annexe 1 below).

The Guidelines require that the RAIO should be 'fair and reasonable' and that '***the terms, conditions and charges for services and facilities offered for access and/or interconnection should support the development of sustainable competition to the benefit of persons in The Bahamas and the national economy***'.¹⁰ However, the Guidelines do not, in many areas, provide a detailed prescription of how the draft RAIO and individual clauses should be written. For example, the Guidelines do not provide detailed descriptions of how the forecasting and provisioning requirements of the RAIO should be drafted, or how SMP operators should identify the appropriate points of interconnection.

URCA, therefore, in reviewing the RAIO sought to identify any aspects of the draft RAIO which may not reflect best practice and which, in URCA's preliminary view, if left unchanged may not support the development of sustainable competition.

URCA has comprehensively reviewed the draft RAIO from a legal, technical and economic perspective, to both ensure that the terms and conditions are consistent with, inter alia, the Comms Act, BTC's licence conditions, the Guidelines, regulatory and other measures issued by URCA and do not create unnecessary barriers for non-SMP operators wishing to interconnect with BTC.

1.3 How to Respond to this Consultation Document

1.3.1 Timing and Process

URCA invites and welcomes comments and submissions from members of the public, licensees and other interested parties on this consultation document, using the questions posed by URCA throughout this document as a guide and with reference to the contents of this document, the Comms Act, BTC's licence, the Guidelines and any other information the respondent wishes to provide.

Reflecting the size, nature and importance of this consultation, the timetable for this consultation will be as follows:

- All submissions to this consultation should be submitted by 5pm on 19th October 2010.
- URCA shall endeavour to publish these responses by 5pm on 20th October 2010. URCA will publish the comments as received unless respondents explicitly ask that their responses be treated as confidential, in total or in part. If any party wishes to have the whole of its submission withheld, it should state that clearly at the beginning of the submission. If the respondent wishes to have some parts withheld, it should put them in separate annexes and clearly mark them as such. In

⁹ This also included checking whether the draft RAIO is consistent with any clarifications on the Guidelines issued by URCA since their publication.

¹⁰ Access and Interconnection Guidelines (ECS 14/2010), paragraph 4.1

the interests of transparency, respondents are requested to avoid confidentiality markings wherever possible.

- URCA will, on 22nd October 2010, separately publish BTC's responses regarding charges for its Joining Circuits and Forecasting and Planning issues that URCA has identified in this consultation document.
- Interested parties will then have a two-week opportunity to comment on submissions made by BTC regarding its charges for Joining Circuits and Forecasting and Planning issues mandated by URCA in this consultation document, which should be submitted by 5th November 2010.
- URCA will, after the end of the consultation period, publish a final decision on the results of the consultation. URCA's final decision on the results of the consultation may require BTC to make additions or changes to the draft RAIO.
- BTC is required to carry out any changes or additions to the draft RAIO no later than thirty (30) business days after being instructed to do so by URCA and shall present the amended RAIO to URCA for review.
- At its discretion, URCA may hold industry workshop(s) to explain/clarify the RAIO process and any proposals set out in this consultation document.
- Following URCA's formal approval of the RAIO, BTC must then publish its fully approved RAIO on its website no later than ten (10) business days from the date of such approval.

Persons may obtain copies of the public consultation document either:

- a. in printed format from URCA's office at the UBS Annex Building, East Bay Street, Nassau; or
- b. by downloading it from the URCA Website at www.urbahamas.bs

Persons may send their written submissions or comments on the public consultation document by 19th October 2010 to the Chief Executive Officer of URCA either:

- a. by hand, to URCA's office at the UBS Annex Building, East Bay Street, Nassau; or
- b. by mail to P.O. Box N-4860, Nassau, Bahamas; or
- c. by fax, to 242 393 0153; or
- d. by email, to info@urbahamas.bs

1.3.2 How to Structure Your Response

Please respond, where possible, to each of the consultation questions in this document (the consultation questions have been conveniently grouped together in Annexe 2 below). Please provide full and detailed responses, including cross references to other documents as appropriate.

For the avoidance of doubt URCA wishes to make it clear that respondents are free to comment or respond on any matter, term or condition in the draft RAIO despite the fact that URCA may not have done so.

1.4 The Structure of the Remainder of this Consultation Document

The remainder of this consultation document is structured as follows:

- Section 2 identifies and discusses the general terms of the draft RAIO against established practices and principles;
- Section 3 reviews the proposed structure of BTC's charges for interconnection services and enabling components;
- Section 4 reviews the level of the proposed RAIO charges, particularly focusing on the extent to which they are cost oriented and reflect an efficient level of costs.; and
- Section 5 provides detailed comments on individual clauses in the RAIO and recommended changes to the draft text, to ensure that the RAIO is fit for purpose.

Annexe 1 compares the content of BTC's draft RAIO with the requirements in Section 5 of URCA's Access and Interconnection Guidelines. Annexe 2 comprises a table of all of the consultation questions.

2 Review of the General Terms of the Draft RAIO

In this Section, URCA highlights those parts of the RAIO which, based on its review and experience, do not appear to reflect established practice and which, it considers that, if left unchanged, could affect the ability of access and interconnection seekers to compete effectively with BTC. In this Section, URCA focuses on general terms, with the following Sections assessing the proposed RAIO charges.

This Section should be read in conjunction with Section 5 below, which presents comments on individual clauses in the draft RAIO, together with URCA's preliminary views or recommendations for how it considers these clauses could be amended to better reflect established practice. Therefore, in this Section, rather than commenting on individual clauses, URCA identifies key themes associated with the draft RAIO and which, subject to the results of this consultation, it considers must be addressed (alongside the remainder of the issues identified in this consultation document) if the RAIO is to be fit for purpose.

URCA addresses the concerns identified in this Section under the following headings:

- the structure of the draft RAIO;
- call conveyance service descriptions;
- the treatment of joining services and points of interconnection; and
- forecasting provisions.

2.1 The Structure of the Draft RAIO

A reference offer should set out the terms and conditions upon which the SMP operator (the access provider) offers to provide interconnection services to other licensed operators. This offer should then form the basis for the interconnection agreement between the two parties. A reference offer should therefore be essentially a unilateral document, describing the offer of the SMP operator.

Although it may be necessary for a reference offer to set out some of what will be expected from the access seeker, the document should not impose on the access seeker any terms and conditions which the access seeker could reasonably expect to negotiate commercially. For example, a reference offer will need to describe the nature of any forecasts required from the access seeker and could impose reciprocal requirements on issues such as network security. A reference offer should not, however, include charges which the (non-SMP) access seeker would offer to the access provider for providing the access seeker's own interconnection services.

In contrast, an interconnection agreement will be a contract between the two parties and will include clauses which commit each party to certain actions or create rights for each party. An interconnection agreement will therefore be bilateral in nature.

In The Bahamas, only BTC has been designated with SMP in fixed and mobile telephony markets and only BTC has a requirement to prepare and publish a reference offer. Although OLOs are bound by conditions in their licences related to interconnection, they may offer interconnection services on a commercial basis. That is, a non-SMP operator may offer interconnection to OLOs on different terms

and conditions, whereas an SMP operator must not discriminate between OLOs. Non-SMP operators are also not bound to offer interconnection services at cost. In contrast, SMP operators are required to offer cost oriented interconnection rates.

URCA is therefore of the preliminary view that BTC should clearly separate the following elements in its current document:

- a draft interconnection contract; and
- the detailed terms and conditions for each RAIO service – i.e., the reference offer.

Consultation Question 1:

Do you agree that BTC should be required to provide a clearer separation between its draft interconnection contract and the draft reference access and interconnection offer? Please detail your response in full.

2.1.1 Reciprocity of terms and conditions

BTC's draft RAIO includes a number of terms which impose obligations on the access seeker. URCA is of the preliminary view that many of the obligations imposed on the access seeker are not appropriate for a reference offer. In particular, it appears to URCA that the following clauses should be amended or removed from the draft RAIO.

- Clause 6.1 imposes reciprocal charging on the access seeker and access provider. That is, it requires an OLO to offer call termination services (for example) to BTC at the same price as BTC offers the service to the OLO. It appears to URCA that this is not appropriate. The RAIO should not seek to impose on OLOs the same prices and terms and conditions as those that are to be offered by BTC. This is because OLOs are not, for example, required to offer cost-based interconnection charges and should not therefore be bound by the charges determined by BTC.
- Clause B.8.4 states that unless otherwise agreed, a new interconnection service will be provided on a reciprocal basis. Again, it appears to URCA that it is not appropriate to include this requirement in the RAIO. The access seeker may not have SMP and therefore, unlike BTC, may not be required to provide interconnection on regulated terms and conditions.

In general, there are several arrangements or requirements to which URCA would expect an SMP operator to commit to which an OLO would not necessarily have to commit to. These include, for example:

- the requirement for the SMP operator to supply services to its own downstream retail business and OLOs on non-discriminatory terms, conditions and charges, with new interconnection services offered to reflect any new retail services introduced by the SMP operator;

- the requirement for the SMP operator to ensure that the quality of service standards for calls handed over from OLOs are no less favourable than those available to the SMP operator's own retail business;
- the requirement for the SMP operator to update and maintain the directory information database, and offer all OLOs materially the same procedures for database entry as that provided to the SMP operator's own retail business;
- the requirement for the SMP operator to make all reasonable effort to make space available at its points of interconnection (POIs) for OLOs to house equipment for their own services; and
- the requirement for the SMP operator to make available in its RAIO, calls to all the international destinations its retail business serves.

Throughout this consultation document (including in Section 5), URCA identifies what appear to be reciprocal clauses in BTC's draft RAIO which URCA, in its preliminary view, does not consider are reasonable. However, to ensure that all such clauses are removed, it appears to URCA that BTC should review and where appropriate redraft its RAIO by removing any obligations on other operators which are inappropriate and unnecessary to manage the interconnection regime in The Bahamas. Any remaining clauses that are reciprocal would need to be fully justified by BTC.

Consultation Question 2:

Do you agree that the BTC should remove any obligations on other operators which are inappropriate and unnecessary to manage the interconnection regime in The Bahamas? Please detail your response in full.

Consultation Question 3:

Do you agree that the BTC should fully justify any reciprocal clauses that remain in the RAIO? Please detail your response in full.

2.1.2 Reciprocity of charges

In many jurisdictions, particularly in Europe, reciprocal termination rates are imposed. However, this reflects a regulatory framework where all operators are declared dominant in a market for call termination services on their network and hence face regulatory obligations. This is not currently the case in The Bahamas, where OLOs have not been found to have SMP in any relevant markets and where URCA is, therefore, not able to regulate the interconnection charges offered by OLOs.

URCA will, in due course, conduct a regulatory proceeding as stipulated in section 40 of the Communications Act. During that process, URCA will consider the extent to which each operator has SMP in call termination and whether the principles relating to reciprocity which are applied in Europe (and elsewhere) should also be reflected in the Bahamian sector. However, prior to this occurring, URCA reaffirms its position that BTC's RAIO should not require OLOs to offer reciprocal charges.

Consultation Question 4:

Do you agree that BTC should remove from its RAIO any reciprocal charging obligations on other operators? Please detail your response in full.

2.2 Call conveyance service descriptions

Annex A of BTC's draft RAIO presents the detailed descriptions of each of the services BTC proposes to offer. However, it appears to URCA that individual service descriptions as set out in the RAIO raise a number of concerns which are described in detail in the remainder of this Section.

2.2.1 Call termination service to geographic numbers

In Clause A.1.1, BTC states that, *"the termination of calls under this Agreement refers to calls originating from numbers in URCA's national numbering plan only. Termination of calls from international origins is specifically excluded from this Agreement."*

This clause, as presently drafted, appears to mean that OLOs will not be able to use BTC's call termination service to terminate calls to BTC customers which the OLOs bring into The Bahamas (by having agreements with international carriers, for example). Instead, OLOs will have to negotiate an 'incoming international call termination service' commercially with BTC.

In both its Preliminary Determination on Obligations on SMP Operators (ECS 18/2009), and its SMP Position Paper (ECS 07/2010), URCA included international call termination services within its category of call termination services, thus requiring BTC to include this service in its RAIO. This service was included to ensure that BTC would not be able to refuse to bring in and transit incoming international calls destined to other operators in The Bahamas. However, it was not the intention of URCA to regulate the settlement rate charged by BTC to operators outside The Bahamas. This is because, under normal circumstances, how licensees treat operators licensed outside The Bahamas would not raise any issues for the domestic market. To reflect this, the final SMP Decision does not refer to international call termination as part of the call termination service which should be included in the RAIO. That is, BTC is not required to include an incoming international call termination service in the RAIO that says what BTC should charge overseas operators for terminating their calls in The Bahamas.

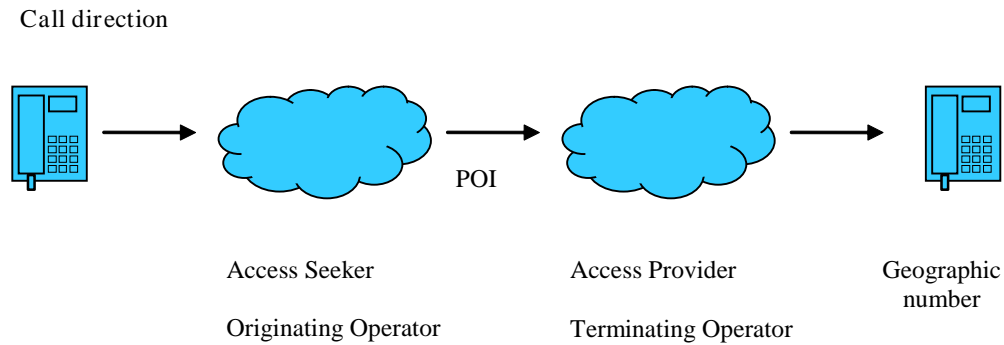
However, it is URCA's preliminary view that BTC should remove the restriction imposed on this call termination service to geographic numbers to allow OLOs licensed in The Bahamas to be able to

terminate incoming international calls on BTC’s network. URCA’s reasoning for this view is set out below.

The potential impact of BTC’s service definition

BTC has not included an international call termination service in the RAIO. In contrast, its call termination service appears to allow OLOs to terminate calls originated in The Bahamas on BTC’s geographic numbers. This is illustrated in Diagram A1 of BTC’s draft RAIO, which is reproduced below.

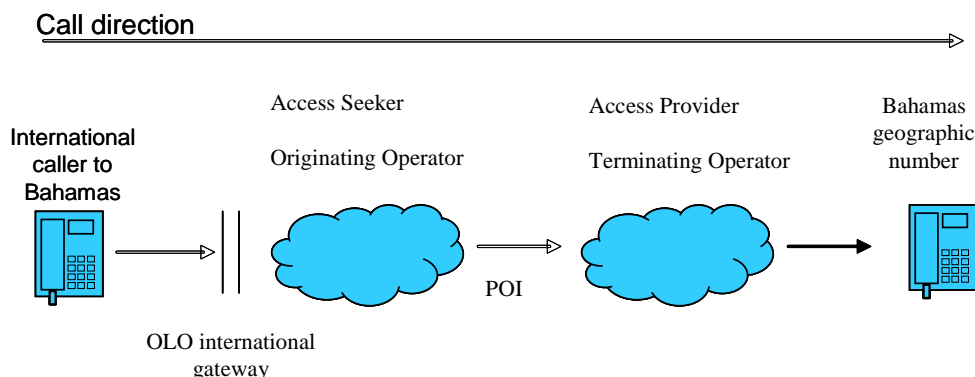
Figure 1. Call termination to geographic number



Source: BTC draft RAIO

However, the service definition specifically does not allow OLOs to terminate calls on BTC’s network which originate outside The Bahamas. For example, a foreign carrier could deliver calls to an OLO in The Bahamas which are ultimately destined for BTC’s customers. In this case (as shown below in **Figure 2**), the OLO would carry the call across its network to its point of interconnection with BTC. The call would then be terminated by BTC on its network. If BTC did not provide this termination service in its RAIO, the OLO would be unable to handle these incoming calls unless it negotiated access to BTC’s network on a commercial basis.

Figure 2. Incoming international call to BTC via OLO



Source: URCA description based on BTC draft RAIO

URCA is also of the preliminary view that this restriction is not appropriate. BTC's SMP applies equally to all calls delivered to its subscribers, regardless of their origination. This is because the termination service is an economic bottleneck. Whilst BTC should not be required to offer cost oriented termination rates to international operators not licensed in The Bahamas, in URCA's preliminary view it ought to be required to offer such cost oriented access to OLOs in The Bahamas, regardless of where the call originates. As shown in the above diagrams, the call termination service provided by BTC to the OLO (i.e., from the POI to the terminating number) is the same regardless of whether the call originates within or outside The Bahamas. If BTC is able to restrict the availability of this service among licensed operators, it could discriminate between licensed operators (including between OLOs and its own retail business) in the provision of the call termination service. This would be contrary to BTC's access and interconnection obligations.

Without the ability to terminate on BTC's network (and on regulated terms) calls from international destinations, URCA is of the preliminary view that OLOs will not be able to compete effectively with BTC to bring international calls into The Bahamas. This is because OLOs need to be able to offer a complete service to international operators and can only do this by purchasing a call termination service from BTC. In its SMP Final Decision, URCA concluded that BTC had SMP in call termination services and that, absent intervention, it could abuse its market position in such a way as to reduce the development of competition among licensed operators in The Bahamas. This, in URCA's preliminary view, applies regardless of the origination of the call.

URCA is of the preliminary view that accepting BTC's proposed service definition could lessen the ability of OLOs to compete with BTC more generally. This is because operators compete for customers based on the entire stream of revenues generated by the customer (i.e., including revenues from both incoming and outgoing call services).

BTC's service description would limit the ability of OLOs to earn revenues from incoming international calls, thus reducing the revenue streams available to these OLOs from individual customers and hence the incentives and ability of the OLOs to compete for customers. This could have a consequential impact on competition for outgoing (retail) call services.

Consultation Question 5:

Do you agree that BTC should include in its RAIO the ability of OLOs in The Bahamas to terminate incoming international calls on BTC's network? Please detail your response in full.

2.2.2 International call transit service

This service *"comprises the carriage of a voice call (including facsimile transmission) originated by an end-user on the Network of the Access Seeker and handed over at a Point of Interconnection to be carried over the Network of the Access Provider to another Point of Interconnection for termination on a third Network outside The Bahamas which is not operated by the Access Provider."*¹¹

That is, as presently drafted, the service appears not to include the termination of the call at its destination outside of The Bahamas. This is confirmed by paragraph A.10.9.b of the service description, which states: *"The above assumes that the Access Seeker negotiates their own Bi-lateral agreements with international carriers for the termination of international calls and that direct accounting arrangements have therefore been agreed between Terminating and Originating Operators"*. In URCA's preliminary view, this would effectively mean that OLOs would have to negotiate bilateral call termination arrangements – including rates – with operators in all countries to which they wish to offer outgoing international call services. Alternatively, under paragraph A.10.9.c of the service description, the OLO could *"request inclusion in the Access Provider's Bi-lateral agreements under a separate commercial agreement"*.

URCA is of the preliminary view that neither of these options is appropriate. Requiring OLOs to negotiate a bilateral agreement with individual operators in other countries will create a significant barrier to entry for the OLOs in international call markets. Given this, the only practical option for OLOs would be to seek inclusion in BTC's bilateral agreements. Although URCA cannot bind foreign carriers to terminate Bahamian calls at cost-based rates, URCA is of the preliminary view that BTC should include OLOs in its bilateral agreements without adding any additional charges to those rates. That is, the OLOs should have the opportunity to offer their customers full access to overseas customers and pay the same for call termination in foreign countries as BTC. This will ensure efficient competition for international outgoing calls in The Bahamas, by allowing OLOs who are equally – or more – efficient than BTC to compete effectively to offer these services to consumers.

Given the above, URCA is of the preliminary view that the international call transit service should be made available to OLOs and that the charge should be based on:

¹¹ BTC draft RAIO, Clause A.10.1.

- a cost based charge for call conveyance on BTC’s network (including BTC’s international facilities); and
- the relevant international settlement rate, passed on at cost.

As the international settlement rates change, the rates charged to OLOs should be adjusted accordingly. Therefore it appears to URCA that the service and price description of the same should allow for price changes to be effected as settlement rates get adjusted. To ensure that the proposed process operates efficiently, URCA may periodically require BTC to provide evidence of agreed international settlement rates based upon which it sets the charges to OLOs.

Consultation Question 6:

Do you agree that the international call transit RAIO service should be made available to OLOs and that the charge should be based on:

- a cost based charge for call conveyance on BTC’s network (including BTC’s international facilities); and
- the relevant international settlement rate, passed on to OLOs at cost?

Please detail your response in full.

Consultation Question 7:

Do you agree that URCA should periodically review the relevant international settlement rates charged by BTC to OLOs for the international call transit RAIO service, to ensure that such charges are passed on to OLOs at cost?

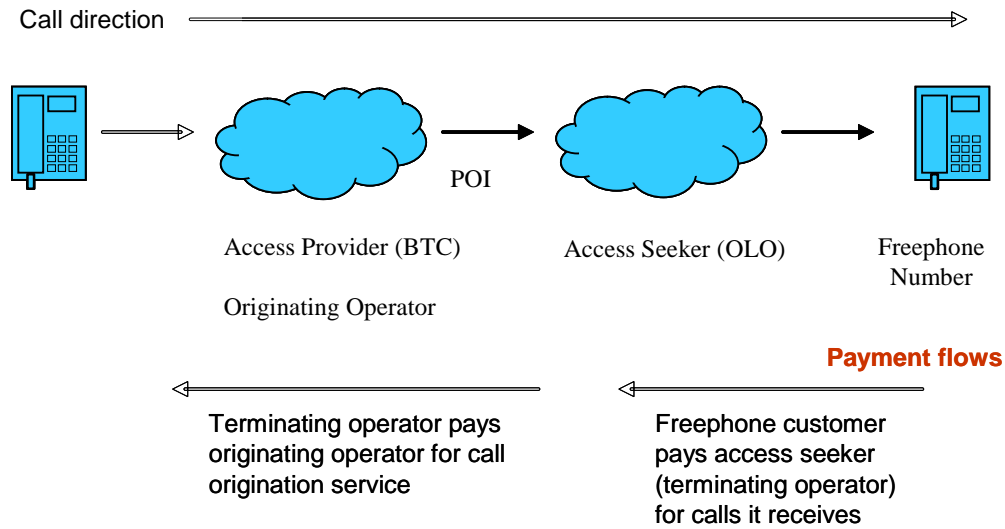
Please detail your response in full.

2.2.3 Call origination service to domestic freephone numbers

The SMP Final Decision required BTC to include in its RAIO a termination service for calls to freephone numbers. BTC has instead defined a service for call origination to freephone numbers.

In BTC’s service description, BTC assumes that the freephone number ‘sits’ on the network of the OLO (i.e., the access seeker). Because the OLO would be paid by the owner of the freephone number (the ‘freephone customer’) for calls it receives, the network originating the call (in this case, BTC, the access provider) would not receive any retail revenue. In the call origination service, the network originating the call would therefore be paid by the network terminating the call for the origination service it has provided.

Figure 3. Call origination service to domestic freephone numbers



Source: URCA description based on BTC draft RAIO

Given the direction of payments for a freephone service and the objectives of the RAIO (i.e., requiring BTC to offer cost oriented interconnection), it seems reasonable for BTC to define the freephone service as call origination and set out the payment it would expect to receive for originating freephone calls terminating on other networks.

However, BTC must also be required to terminate calls to freephone numbers on its network, so that retail customers of OLOs can call all local Bahamian numbers. Whilst the price that an OLO would charge to BTC for originating this call should be determined by the OLO, other non-price aspects of this service must be included in the RAIO.

Call origination to domestic freephone numbers from mobile numbers

In its tariff schedule, BTC has also included a charge for call origination from BTC's mobile network to freephone numbers. The charge for this service (derived from BTC's accounting separation results) has been based on the costs BTC faces when originating calls on its mobile network. The rationale for this charge is the same as that for freephone calls originating on BTC's fixed network: namely that BTC does not receive retail revenues for originating these calls and should therefore be compensated by the network provider of the freephone services for the costs it incurs in the origination leg of the call.

However, in some jurisdictions, mobile operators do charge their retail customers an 'airtime charge' when calling a freephone number. (That is, calls from mobiles to freephone numbers are not always free to the calling party.) In these circumstances it would not be reasonable for the mobile operator to also charge the terminating operator for the call origination service it provides when its customers call a freephone number on another network. This is because the mobile operator would already be recovering the costs of call origination from its airtime charge to the calling party. It is URCA's

preliminary view that to also charge a call origination fee would therefore result in the operator over-recovering the costs it incurs.

URCA has sought clarification from BTC on whether it charges an airtime fee for customers calling freephone numbers from mobiles. At the time of preparing this consultation document, BTC had not responded to this request for clarification, stating instead that it would investigate this further and revert to URCA.¹² Without this clarification it is not possible to conclude whether the proposed charging structure for calls from mobiles to freephone numbers is appropriate and URCA therefore requires BTC, in its response to this Consultation Document to respond satisfactorily on this point.

Consultation Question 8:

Do you agree that BTC must:

- (i) add a RAIO call termination service for calls to freephone numbers on its network; and
- (ii) remove the RAIO charge for call origination from BTC's mobile network to freephone numbers on an OLOs network if BTC charges for such airtime?

Please detail your response in full.

2.2.4 The treatment of calls to premium rate numbers

BTC has not defined a specific service for terminating calls from OLOs to premium rate numbers. It appears to URCA that this should be captured by the RAIO, as customers of OLOs must be able to reach the same numbers as customers of BTC.

URCA understands from BTC that domestic premium rate numbers are not available in The Bahamas. However, customers in The Bahamas can make calls to premium rate numbers in the USA. It is therefore important that customers of OLOs are also able to make calls to these numbers. (That is, if BTC's network business provides connectivity for its retail customers to call premium rate numbers, this connectivity should be provided on a non-discriminatory basis to customers of OLOs also.)

In clarifications provided to URCA on the draft RAIO, BTC has stated that the responsibility for the arrangements for the termination of all international calls rests with the OLO. This includes calls to 1-800 (USA freephone) and 1-900 (USA premium rate) numbers. This implies that an OLO wishing to use BTC's network to terminate a call to a USA premium rate number would need to use the international transit service included by BTC in its draft RAIO, and combine this either with its own bilateral call termination arrangements with foreign carriers, or request inclusion, on a commercial basis, in BTC's carrier agreements. As described above in Section 2.2.2, URCA is of the preliminary view that excluding international call termination as part of the RAIO service is likely to cause a significant practical barrier to entry for OLOs. This would be in line with guidance previously given by URCA to BTC.

¹² BTC's written response to URCA's queries on the draft RAIO (BTC / URCA meeting of June 25th 2010).

Consultation Question 9:

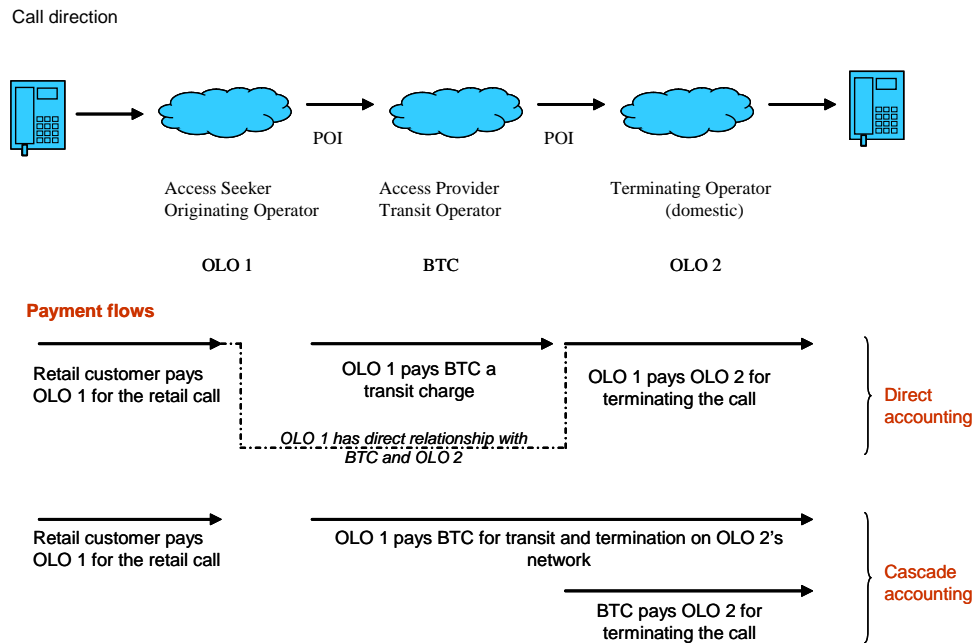
Do you agree that BTC must include a service for terminating calls from OLOs to premium rate numbers in its RAIO? Please detail your response in full.

2.2.5 National call transit service

This service provides OLOs the opportunity to transit BTC's fixed network to deliver calls to third party operators (including BTC's mobile network). This means that OLOs will not have to have direct interconnection with all other networks in order to provide any-to-any connectivity for retail customers. This includes BTC's mobile network, as BTC is not offering direct interconnection to its mobile business. Therefore, any calls from an OLO to BTC's mobile network will need to use the national call transit service.

In the service schedule (Clause A.11.10.b), BTC states that OLOs will need to make direct accounting arrangements with other operators for the call termination (or origination) services they will purchase in addition to the transit service. For example, if a call originated on the network of OLO 1 and terminated on the network of OLO 2, OLO 1 would have to arrange and pay OLO 2 for the call termination service separately to the payments it makes to BTC for the call transit service. This 'direct accounting' differs to 'cascade accounting' normally applied for arrangements between operators. Under cascade accounting, the OLO would not have to seek separate arrangements with each of the other operators. Rather, the OLO originating the call would pay BTC for the call transit and termination legs, with BTC then paying the called party's network for termination. These two forms of payment are represented graphically in **Figure 4**, below.

Figure 4. Call transit service and payment mechanisms¹³



Source: URCA description based on BTC draft RAIO

Given the relatively small number of OLOs likely to enter the market in The Bahamas (at least in the short term), the direct accounting model may not add significantly to the costs of entering the market. This is in contrast to the situation for international call termination, where an OLO would have to negotiate settlement rates with multiple international operators. Nevertheless, as the number of OLOs increases, the complexity of accounting arrangements under direct accounting will also increase. URCA therefore seeks the views of interested parties on this aspect of the national call transit service.

Consultation Question 10:

Do you agree that BTC should offer both direct accounting arrangements and cascading account arrangements for its call transit service? Please detail your response in full.

¹³ This figure is based on a domestic fixed to fixed call. Under RPP, the called party in a domestic fixed to mobile call would pay the mobile operator an airtime charge. There should, therefore, be no payment to OLO 2 for call termination.

2.2.6 Handover arrangements for call conveyance services

In each of the service schedules for call conveyance services BTC includes a provision for call handover. This relates to where in the network the OLO should hand over the call to BTC. Generally, there are two types of call handover.

- **Near-end handover.** This refers to the situation where the originating party hands over the call to the terminating party at the point of interconnection nearest to the network termination point (NTP) of the calling party.
- **Far-end handover.** This refers to the situation where the originating party hands over the call to the terminating party at the point of interconnection nearest to the NTP of the called party.

In the service schedules, BTC applies a mix of near-end and far-end handover. For call termination to geographic numbers, BTC is proposing far-end handover, whilst for all other (non-transit) services it proposes near-end handover. It is not clear why BTC has mandated the call handover arrangements within its draft RAIO, as many RAIOs do not specify the required handover arrangements for access seekers. Rather, URCA is of the preliminary view that it should be up to the access seeker where it chooses to hand over calls, so long as it pays for the cost the access provider incurs in providing the call termination service. For instance, the World Trade Organisation (WTO) rules state that traffic is handed over at any technically (and economically) reasonable point. This implies that, in the vast majority of cases, geographic calls are handed over far-end, so the originator can use its own network as much as possible. The access provider must also state for each number range what the closest point of interconnection is, in order to minimise the OLOs' costs. Non-geographic and mobile calls are commonly handed over near-end, as the originator does not know the physical location of the called party and must of necessity hand over near-end according to the wishes of the terminating operator. However, these handover preferences may vary by operator and jurisdiction. For example, a new entrant may prefer to handover its geographic-destined voice traffic at the near-end if utilising its own transit network is more costly than routing traffic over the fixed incumbent's network.

URCA is, therefore, of the preliminary view that BTC should remove any call handover requirements from its final RAIO. Instead, BTC should add the following wording in the relevant Section of its RAIO:

“Traffic may be handed by the Access Seeker to the Access Provider at any technically and economically reasonable point. The Access Provider shall provide to the Access Seeker, for each geographic number range, the closest POI for call termination.

For the avoidance of doubt, unless otherwise agreed between the parties, the Access Seeker can hand over traffic at any POI it chooses. The Access Seeker shall notify the Access Provider of the POI it proposes to use for each type of traffic and shall only change such handover POI provided that it has provided written notice to the Access Provider of no less than 2 calendar months.”

Consultation Question 11:

Do you agree that BTC should remove any call handover requirements from the RAIO and that BTC should amend the RAIO to the wording proposed by URCA? Please detail your response in full.

2.3 Joining Circuit Service

In the detailed RAIO comments in Section 5 below, a number of instances are cited where there is some doubt over the precise meaning of some clauses, as the term 'Joining Circuit' is being used when other items are implied, including:

- groups of T1 Joining Circuits;
- the higher level transmission bearer on which the Joining Circuits are carried (fibre or radio); and
- the Traffic Route carrying a given type of traffic over the interconnection.

This issue is important because it affects a number of the processes described in the RAIO and who is responsible for each action. For example, assuming the use of uni-directional traffic routes, in the draft RAIO it is the responsibility of the Access Seeker to dimension and order any Joining Circuits needed for traffic leaving its network and terminating on the network of the Access Provider.¹⁴ However, it is usual for the Joining Circuits of both parties to be carried on the same transmission bearer, so such bearers need to be jointly and mutually planned.¹⁵ Such decisions include the type of bearer (fibre or radio) and whether it will be constructed to provide an interconnection of one of the three main types:

- Co-location (sometimes known as In-building interconnect)
- Customer Sited Interconnection
- In-span Interconnection

This last decision will determine who will construct the facility and who provides (and where) the multiplex equipment at each end of the link.

While it is fairly clear who pays for the Joining Circuits, there is no ideal system for deciding who pays for the construction of the Joining Path, as URCA is more inclined to call the transmission bearer. In some countries, the non-constructing party pays the constructing party for half of the cost. As each party then owns 50% of the facility, the only charge when a Joining Circuit is turned up for service is the one-off installation charge and the rental of the port on the distant switch. But such a system gets complex when as may happen, the utilisation of the Joining Circuits is not balanced.¹⁶ Therefore, in some countries, the constructing party bears all the cost of the facility on its side of the PoI and the other party pays a Joining Circuit charge which covers both the transmission and the distant switch port. This leaves the constructing party bearing any costs of spare capacity, but arguably these are very low. Another variant sometimes found requires the access seeker to pay for all the cost of the Joining Path, but this gives the access provider an unfair 'free ride' when it uses the link for its traffic in the other direction. In a minority of cases, Joining Paths are segregated to one direction of traffic to avoid this problem, but this will never be appropriate in smaller countries like The Bahamas.

¹⁴ In the case of Carrier Selection and Freephone origination, it is the traffic leaving the Access Provider's network which is the responsibility of the Access Seeker.

¹⁵ Of course, in some cases, small routes may be provided as separate T1 circuits, with no higher level bearer.

¹⁶ This is common where a Path carries Carrier Selection as well as the more symmetric termination traffic.

Whatever system is adopted, there should be an appropriate way for each party to pay for costs it has incurred for the carriage of its traffic, remembering that the cents-per-minute conveyance charges only pay for the network costs beyond the distant switch port and make no contribution to the Joining Circuit, distant switch port and any other link costs, such as intra-building links.

URCA is, therefore, of the preliminary view that the following terms (or something similar) should be adopted in the RAIO:

- Joining Circuit, meaning the T1 capacity provided over a PoI;
- Joining Path, meaning the higher level transmission bearer; and
- Interconnect Traffic Route, meaning the group of 64kbit/s channels over which a given type of interconnect traffic is directed. A Traffic Route will usually be carried over two diverse Joining Paths for security and may even have an overflow via another PoI to cope with unusual traffic flows.

It is URCA's preliminary view that the RAIO should also be enhanced to describe how decisions relating to the planning, construction and provision of the Joining Path are achieved, and the tariff schedule in Annex G should reflect the appropriate charges of the chosen cost-recovery system.

Consultation Question 12:

Do you agree that the following terms should be incorporated in BTC's RAIO:

- Joining Circuit, meaning the T1 capacity provided over a PoI;
- Joining Path, meaning the higher level transmission bearer; and
- Interconnect Traffic Route, meaning the group of 64kbit/s channels over which a given type of interconnect traffic is directed. A Traffic Route will usually be carried over two diverse Joining Paths for security and may even have an overflow via another PoI to cope with unusual traffic flows?

Please detail your response in full.

Consultation Question 13:

Do you agree that further details need to be included in the RAIO on how decisions relating to the planning, construction and provision of the Joining Path are achieved and Annex G should reflect the appropriate charges of the chosen cost-recovery system? Please detail your response in full.

2.4 BTC's proposed number of Points of Interconnection

Section 4.2 of URCA's final Access and Interconnection Guidelines require BTC to provide interconnection at *"any technically feasible point, unless interconnection at that point:*

- *is not economically feasible;*
- *is not feasible given the existing network configuration; or*
- *would compromise the integrity of an electronic communications network (whether the SMP operator's, interconnection seeker's, or a third party's network); or*
- *would compromise the interoperability of any electronic communications network (whether the SMP operator's, interconnection seeker's, or a third party's network)."*

In Schedule 4 to Annex C of its draft RAIO, BTC states that there are two points of interconnection available in its network: (i) a Pol on Grand Bahama and (ii) a Pol on New Providence. BTC further states in Clause B.6.3 that, upon receipt of an interconnection application from an access seeker, BTC will undertake a feasibility study to *"establish whether it is technically, physically and economically feasible to provide the Service Request in the locations indicated."*

URCA understands that given its transition to NGN, BTC does not appear to plan to offer additional Pols, other than the two proposed in the draft RAIO. However, the fewer Pols that are available, the greater potentially will be the costs to OLOs of interconnection. For example, if OLOs do not have infrastructure on the islands where Pols are placed, they will need to backhaul traffic from the island on which they have their own infrastructure to the Pol. Alternatively, where they have customers on islands without a BTC Pol they would have to take traffic to the nearest BTC Pol. This concern has also been raised in stakeholders' initial responses to BTC's draft RAIO, where a stakeholder raised the possibility of BTC providing 'virtual' interconnection services (i.e., for BTC to provide any required off-island joining services to the existing Pols).

At this point, based on the information available to it, URCA is not in the position to form a view on whether the two existing Pols are the only ones that are economically and technically feasible or whether others should be established. At the same time, and in the absence of detailed information on this issue, URCA cannot form a view on whether so called virtual Pols should be established.

URCA therefore welcomes views from all interested parties on the number of Pols provided by BTC and its proposed approach to review interconnection requests at new Pols. It should be kept in mind that the final decision of URCA on whether, for the purposes of approving the current draft RAIO, the current offer of two Pols is acceptable, is without prejudice to any applications that BTC may receive from other operators with a view to establishing additional Pols and any view that URCA may take, based on the facts of any case, following the possible refusal for such a request by BTC. URCA cannot fetter its discretion, when considering future cases, in deciding whether additional Pols are appropriate or not.

Consultation Question 14:

Do you agree that the current number of Pols provided by BTC and its proposed approach to review interconnection requests at new Pols are feasible? Please detail your response in full.

2.5 Planning and Forecasting

The draft RAIO describes very little of the proposed processes for forecasting and planning. A Network Plan is described, but this is defined as *“a diagram of the layout and structure of the Networks of the Parties, including the Points of Interconnection and Joining Circuits. It shall also show major changes proposed by a Party for its Network over the next three years”*.

URCA is of the preliminary view that this is not appropriate. For example, by way of contrast, the parties to an interconnection agreement usually provide each other with quarterly forecasts, extending out for the future 18-24 months, updated quarterly. These forecasts cover both requirements for Joining Circuits and traffic volumes on routes. At each quarterly update, there is a significant degree of flexibility to revise forecasts up and down, but this decreases for the nearer periods when operators might be expected to have to order and install equipment to meet the forecast. Each quarter, the forecast for the next three months becomes an Advanced Capacity Order (ACO) and this becomes a firm commitment to supply. Even then, there is usually a margin of 10% for under-ordering. Any requests above the forecast are dealt with on a best endeavours basis. If an operator fails to order 90% of the ACO level over the three month period, the other operator may reserve the right to impose penalties, though as any equipment ordered will eventually get used by the interconnecting party or the access provider itself, such penalties should only be levied if the capacity is not used over the next period and actual unrecoverable costs have been incurred. Some operators often waive payments as they can be counter-productive to good relations.

There are many variations in these processes but the above is typical. In some countries, there are no penalties applicable to operators in the first two years of operation, as forecasting during the start-up phase can be extremely difficult.

In the light of BTC’s proposals, it is important to consider the issue of what form of forecasting and planning is appropriate for the Bahamian environment. On the one hand, the lack of a formal and strict forecasting and ACO system is welcome, as such arrangements can prove very demanding for new

operators, especially in the early years. On the other hand, if there is no forecasting system at all, there is a risk that equipment and manpower resources would not be available when required to expand an interconnection.

In conclusion, URCA is of the preliminary view that, in responding to this consultation document, BTC should provide details of an appropriate forecasting and capacity planning system, reflecting the scale of local operations. This forecasting and capacity planning system should be reflected in BTC's RAIO which, before being concluded, must be reviewed and approved by URCA.

URCA does not consider that it is appropriate for the regulator, at least at this point in time, to seek to set out the exact specification for this system, as this should be developed by BTC. However, to facilitate the consultation process, URCA has set out a proposed list of minimum requirements (in the form of key principles) for such a system (see text box below). It should be noted that some of these key principles are already covered in BTC's draft RAIO. The particular areas where it appears to URCA that BTC's draft RAIO requires further details are on the issues of forecasting, capacity ordering and contents of the Network Plan.

Proposed minimum requirements for BTC's planning and forecasting system

BTC's planning and forecasting system ("The System") should be built upon the following key principles:

1. The System should provide details of what is expected to be in the Network Plan – including periods to be covered, information to be included and at what level of detail. The Network Plan must include an outline description and architecture of both parties' networks, including signalling.
2. The System should specify how a new interconnect relationship is planned and opening capacity deployed and introduced.
3. The System should specify any minimum configurations required for interconnect (e.g. two separate physical routes) and any other requirements to ensure resilience.
4. The System should specify the available means of physical interconnection, such as Collocated Interconnection, Customer sited interconnection and In-span interconnection and how decisions on which means of physical interconnection is used are made.
5. The System should specify what information Access Seekers should supply and at what frequency to ensure that capacity will be available for deployment (subject to agreed standard delivery lead-times) when ordered – whether by formal forecasts or other means.
6. The System should specify the lead times required for different items, e.g., new Points of Interconnection, new physical interconnect routes, additional (or

reduced) capacity on existing links, changes in the configuration of installed equipment, Data Management Amendments (including changes in routing configurations), and introduction of new numbering blocks.

7. The System should specify those items which are the responsibility of each separate party to order and those which might be the subject of bilateral agreement between the parties, such as physical routes carrying capacity of both parties and traffic routes used bi-directionally for both parties.
8. The System should provide clarity on whether and at what period, an Access Seeker's forward capacity orders become committed and the consequences (if any) of placing actual orders below or in excess of any such commitments.
9. The System should specify the lead times required to inform the other party of structural changes in one party's network which might affect the interconnection of traffic with the other party's network. These could include opening and closing of Poles, opening and closing of telephone exchanges, re-parenting of number groups on different exchanges, changes in the PoI designated for reaching any given exchange, changes in network architecture and technology (such as introduction of NGN), changes in technical interfaces at Poles and any other technical changes impacting on the end-to-end interoperability of services.

Consultation Question 15:

Do you agree with the following recommendations by URCA:

- (i) BTC should, in responding to this consultation document, provide an appropriate forecasting and capacity planning system, reflecting the scale of local operations.
- (ii) The agreed forecasting and capacity planning system should be reflected in BTC's RAIO which, before being concluded, must be reviewed and approved by URCA.

Please detail your response in full.

3 Review of the Proposed Charging Structure for Services

In this Section, URCA reviews a number of issues relating to the charging structures proposed by BTC. Any comments in this Section are without prejudice to URCA's preliminary views presented in Section 4 on the proposed level of these charges.

3.1 On-island charges

Local calls in The Bahamas are currently unmetered. That is, consumers do not pay per minute or call charges for making fixed to fixed calls within the same island (local calls). URCA understands that this is the case for both BTC and SRG customers and for both on-net and off-net local calls.

BTC's draft RAIO contains termination charges for intra-island fixed voice calls of 2.68 cents per minute. BTC states that these charges are based on the AS results and as such follow the principle of cost orientation. However, given the structure of the retail market, it appears to URCA that introducing a non-zero termination rate for local calls could have a significant impact on the development of competition in the fixed telephony market, as well as on the structure of retail pricing for domestic telephony services. URCA therefore believes that it is important to assess fully the potential implications of introducing such a charge and to understand the views of all stakeholders on this matter. URCA therefore seeks the input of all parties on this matter. It begins by firstly setting out the rationale for introducing a cost based intra-island fixed voice interconnection rate and then considers its potential impact.

3.1.1 The rationale for introducing a cost base termination rate

URCA considers there to be two possible reasons for introducing a non-zero rate for intra-island fixed call termination:

- **Cost orientation requirements contained in URCA's guidelines.** The Access and Interconnection Guidelines (in accordance with s. 40(1)(b) of the Comms Act and Condition 40 of BTC's Individual Operating Licence) require interconnection charges offered by SMP operators to be cost oriented.¹⁷ Such an obligation is normally applied to individual services so that each charge in a RAIO should be determined based on the cost of providing that service. As such, BTC's proposal to introduce a charge appears in line with the Comms Act, BTC's licence and the final Guidelines.
- **Existing arbitrage potential for incoming international calls.** Introducing a cost oriented charge could also reduce arbitrage possibilities for OLOs terminating incoming international calls on BTC's network. As set out in Section 2.2.1 above, URCA is of the preliminary view that BTC should not exclude calls originating from abroad from its RAIO. This means an OLO could use the RAIO service to deliver international calls to BTC and, in the absence of a charge, pay zero. This would allow the OLO to engage in arbitrage between international call providers (who are charged a commercial rate by BTC to terminate incoming traffic) and BTC. This is because any incoming international calls which the other licensed operator hands over to BTC to terminate would not attract an

¹⁷ Section 4.2, Access and Interconnection Guidelines

interconnection charge from BTC if these calls use BTC's on-island call termination service. As such, introducing a per-minute charge for (domestic) intra-island call termination is likely to reduce these arbitrage possibilities.

3.1.2 The potential impact of introducing a cost oriented termination charge

It is URCA's preliminary view that introducing a per-minute charge for intra-island domestic call termination could have a significant effect on the development of the market for fixed telephony services in The Bahamas. However, the full extent of this is likely to depend on two factors: firstly, whether OLOs will introduce reciprocal rates, and secondly, the traffic balances between the operators.

BTC is currently the only SMP operator in the fixed voice telephony market. Any OLO, therefore, does not have to offer cost oriented interconnection charges. Although BTC has proposed making the terms and conditions in the RAIO reciprocal between the access seeker and access provider, this is not required by the Access and Interconnection Guidelines (as discussed in Section 2.1 above). Therefore, any OLO will be able to set its own call termination charges. As part of this, it could decide not to charge for terminating on-island calls. However, URCA is of the preliminary view that any OLO would be likely to respond to any BTC charge for intra-island termination by also introducing its own charge for intra-island termination on its network. This is because otherwise, absent any other changes to retail prices, the OLO would incur a net interconnection outpayment to BTC for intra-island calls. This could place the OLO at a disadvantage in retail markets. Overall, this could lead to two scenarios:

- **Introduction of on-net / off-net price differentials.** If both operators introduce per-minute charges for intra-island call termination, this may lead to pressure for the imposition of retail charges for off-net local calls, in order for the operators to recover the interconnection outpayments. This would result in on-net / off-net differentials in local call charges (i.e., consumers paying for off-net calls but not for on-net calls). If this does occur, it could result in the alternative licensed operator's customers facing a higher perceived average call charge for local calls. This is because these customers will tend to make more off-net calls (on a per customer basis) than BTC's customers.¹⁸ This could potentially disadvantage the alternative operator in the retail market.¹⁹
- **No on-net / off-net price differentials being introduced.** In contrast, if the operators introduced the same metered rate for retail on-net and off-net local calls, this could lead to a more efficient use of network infrastructure. This is because the price would provide a signal to consumers on the resource costs of local calls. This would be expected to lead to a reduction in local call volumes, although depending on the average retail price, it may increase significantly the average cost of telephony services to consumers in The Bahamas (assuming there was no consequent reduction in other charges). This could potentially affect most vulnerable users who rely on local calls from fixed lines.

¹⁸ As the alternative operator is likely to have a smaller market share, if one of its customers wishes to call another person in The Bahamas it is more likely that the call will be off-net.

¹⁹ URCA notes that this could be countered by URCA preventing BTC from introducing on-net / off-net differentials in the retail market. However, this would require further direct intervention in the retail market and unless a similar constraint is placed on all alternative licensed operators as well, they could still introduce an on-net / off-net differential.

3.1.3 Preliminary views

URCA understands that in some markets reciprocal per-minute charges are applied for local call interconnection, even though retail local calls are unmetered.

For example, URCA understands that in some of the states in the USA, local calls remain unmetered although fixed voice operators are charged a non-zero termination rate for these calls. However, in the USA, URCA understands that retail charges for access are generally considered to also cover the cost of local calls, meaning that providers effectively 'fund' termination on other networks through their retail charges. This may not be the case in The Bahamas.

URCA further understands that in Barbados, the incumbent fixed voice operator Cable & Wireless Barbados charges a non-zero fixed termination rate whilst offering unmetered local calls to its retail customers. However, URCA understands that the competitive situation in Barbados is different to that in The Bahamas, as there is no full end-to-end fixed network operator competing with the incumbent, Cable & Wireless Barbados. As such, fixed termination traffic is likely to be limited, with the local termination charge primarily paid by competing mobile operators. Mobile to fixed calls are not offered on an unmetered basis.²⁰

Taking all of the above into account and given the cost orientation principle contained in the Comms Act, BTC's licence and the Access and Interconnection Guidelines, URCA is of the preliminary view that BTC should be allowed to levy a cost oriented charge for intra-island fixed call termination services. However, URCA seeks the views of all stakeholders on this proposal and any potential implications this may have on the market. URCA would further like to reassure all stakeholders that it will continue to closely monitor the market following the introduction of any charge, applying where necessary its *ex-post* powers to prevent any anti-competitive behaviour in the market and safeguard the interest of customers.

Consultation Question 16:

Do you agree that BTC should continue to offer free local calls given the non-zero RAIO charge for intra-island interconnection? Please detail your response in full.

²⁰ According to tariff information published online, both Digicel and LIME charge their retail customers for mobile to fixed calls (outside of any free call allowances).

3.2 RAIO charges for other “free” retail services

In addition to “free” on-island calls, BTC’s monthly access charge also includes unlimited:

- calls to emergency services;
- calls to national directory enquiries; and
- calls to automated ancillary services (i.e., weather by phone/time of day services).

That is, these services are bundled with fixed access and incur no additional per minute usage charge.

The draft RAIO contains non-zero charges (Annex G.5) for the equivalent wholesale inputs for the BTC retail services above. URCA is minded to retain non-zero charges at an appropriate level in BTC’s final RAIO but is concerned that the proposed RAIO charges in combination with zero retail charges may result in alternative operators not being able to offer competing or substitute services using the wholesale inputs offered under the RAIO.

As such, URCA has set out below its preliminary proposals to ensure that alternative operators can use the wholesale inputs offered under an approved RAIO to replicate the BTC retail services in question.

3.2.1 Calls to Emergency Services

Delivering emergency call services to retail customers free of charge is an obligation under each operator’s licence. Because of this requirement, no operators (including BTC) are allowed to charge retail customers for calls to emergency services.

URCA recognises that the practice in most jurisdictions is for the interconnection provider to include a non-zero charge for calls to emergency numbers in its reference offer, while downstream competitors recover the costs of delivering the service to their retail customers from general revenues. This approach would be consistent with the access and interconnection framework in The Bahamas as it allows BTC to recover its cost incurred in providing the equivalent wholesale service and does not require BTC to subsidize the competition.

As such, URCA proposes to allow BTC to retain a non-zero charge for this wholesale service in the final RAIO with the stipulation that all operators should recover the costs of delivering the service to their retail customers from general revenues.

Consultation Question 17:

Do you agree that BTC should be able to charge a cost oriented tariff in the RAIO for terminating calls to emergency services, and that each licensed operator should recover the costs of providing free emergency call services to their retail customers from their general revenues? Please detail your response in full.

3.2.2 Calls to DQ and Automated Ancillary Services

URCA proposes to allow BTC to retain a non-zero RAIO charges for DQ call services and automatic ancillary services, but URCA is equally concerned that the proposed RAIO charges in combination with zero retail pricing may result in alternative operators not being able to offer competing or substitute services using the wholesale inputs offered under the RAIO.

As such, URCA is inviting BTC to submit retail proposals on how it will ensure replicability of calls to DQ enquiries and automated ancillary services given the non-zero RAIO charges for the wholesale inputs under the RAIO. BTC's proposals should ensure compliance with the competition provisions of the Communications Act and any other relevant documents.

URCA requires BTC to submit its proposals, along with the timelines for implementation, within two months of the date of publication of this consultation document. If appropriate, URCA will further consult with the industry on the proposals and their implementation.

If URCA does not receive realistic and appropriate proposals from BTC, URCA will review the situation and if appropriate it could mandate BTC to remove the non-zero charges for terminating calls to directory enquiry services and automated ancillary services originating from other operators; or require such retail pricing changes as may be appropriate to ensure fair competition between OLOs.

Consultation Question 18

Do you agree with URCA's requirement for BTC to submit retail proposals for calls to DQ enquiries and automated ancillary services given BTC's non-zero RAIO charges for equivalent wholesale inputs? Please detail your response in full.

3.3 Mobile termination charges

BTC operates a receiving party pays (RPP/MMP)²¹ regime for domestic fixed to mobile calls. This means that a BTC mobile customer pays an airtime charge to BTC when receiving a domestic fixed call on his or her mobile telephone. This contrasts with the calling party pays (CPP) model employed in many other jurisdictions, including throughout Europe and most of the Caribbean. In a CPP system, it is free for a customer to receive a call on their mobile telephone.

Mobile termination rates are applied in a CPP environment to compensate the mobile network operator for the cost it incurs in providing the call termination service. This is appropriate because the mobile operator does not receive any revenue from its customer for providing this service. This same logic

²¹ Within this consultation document, URCA uses the terms 'mobile party pays (MMP)' and 'receiving party pays (RPP)' interchangeably.

applies to fixed termination services, which again compensate the receiving network for the cost it incurs in terminating the call.

BTC has, however, proposed that OLOs should pay BTC a mobile termination rate for delivering fixed calls to BTC mobile customers.²² BTC has stated in its draft RAIO that this charge would only apply *“in the event that inbound retail call charges to mobile users (MPP) are discontinued or in the case these tariffs are lowered below the cost of providing the mobile termination service.”*²³

URCA infers from this that BTC is not proposing to charge a non-zero mobile termination rate as part of this RAIO. URCA is of the preliminary view that this is correct. That is, fixed network operators should not pay a mobile termination rate at the same time as the retail mobile airtime charge is paid by mobile customers. If both the retail and the termination rate charge were levied, BTC would likely over-recover the costs of mobile termination.

However, BTC has also suggested to charge a non-zero termination rate for domestic calls terminating on its mobile network if it still applied a MPP regime but the retail rate fell below cost (as suggested above). Besides being practically difficult to administer, URCA is of the preliminary view that allowing BTC to do so would give it excessive freedom in how termination rates are set and could potentially allow BTC to engage in anti-competitive behaviour by pricing the retail service below cost. URCA, therefore, is of the preliminary view that BTC should be required to choose a single approach on how to recover its cost for these services (i.e., either via MPP and a zero termination rate, or based on a non-zero termination charge, but no MPP element).²⁴

Until recently BTC’s mobile customers also incurred an airtime charge when receiving international calls. However, as part of its Final SMP Decision, URCA directed BTC to remove this retail charge for incoming international calls. As such, BTC should be able to levy a cost oriented charge for terminating incoming international calls to its mobile customers which are transited through a third party licensed operator. For the avoidance of doubt, URCA is of the preliminary view that it should not, under normal circumstances, regulate BTC’s arrangements with international carriers for terminating incoming international calls on its mobile network. However, there may be instances where the international carrier delivers calls to an OLO in The Bahamas which the OLO then wishes to terminate on BTC’s mobile network. In these cases, BTC would not receive any revenue from either the international carrier or its own retail customer. It is therefore reasonable for BTC to recover the costs it incurs in providing this mobile call termination service.

²² As there are no other mobile network operators in The Bahamas, there are no off-net mobile to mobile calls. In this instance, MPP (mobile party pays) is the same as receiving party pays.

²³ BTC Draft RAIO, Annex G.3

²⁴ Any changes to retail tariffs for price regulated services would require prior approval of URCA, as per the Retail Price Rules.

Taking the above into account, URCA is of the preliminary view that mobile termination charges should not be included in the final RAIO except for incoming international calls to mobiles (delivered via an OLO).

Consultation Question 19:

Do you agree that mobile termination charges should not be included in the final RAIO except for incoming international calls to mobiles (delivered via an OLO)? Please detail your response in full.

3.4 Time of day adjustments to call service charges

BTC's RAIO charges are not differentiated by the time of day in which the call is made. For fixed voice services, this is in line with BTC's retail pricing structure, which also does not contain any time of day adjustments.²⁵

It is URCA's preliminary view that, generally speaking, it is important to ensure that prices accurately reflect the underlying costs of providing the service in question. This provides appropriate price signals to customers and ensures best use of scarce resources. Network capacity requirements are driven by demand in the peak period and therefore relatively higher peak charges could be reasonable. Furthermore, if a time of day gradient reduces demand in peak periods and increases demand in other periods it can help to avoid a situation where a network operator has to invest in new capacity to meet peak demand, despite there still being excess capacity available at off-peak times. For these reasons, a peak/off-peak tariff gradient is typically applied to interconnection services offered over communications networks. However, the demand for interconnection services is derived from the demand for retail call services. That is, applying differential peak and off-peak charges to interconnect services will not affect the demand for retail call services unless differential peak and off-peak rates are also applied to retail charges. Currently in The Bahamas, operators do not differentiate between peak and off-peak rates for fixed voice services.

In contrast, applying different peak and off-peak interconnection rates under a flat retail charging structure is likely to reduce the margin available to OLOs to compete with the incumbent in the provision of call services during peak periods. This is because the interconnection charge in peak periods would be set above cost, with the off-peak rate set below cost. It is therefore typical for the interconnection tariff gradient to reflect the retail tariff gradient applied by the SMP operator for its retail services.

²⁵ The retail prices for BTC's pre-pay mobile and selected post-pay mobile products differ between peak, off-peak and weekend. However, given the prevailing MPP regime, there are currently no RAIO charges for mobile call services applicable in The Bahamas.

URCA is of the preliminary view that this is an appropriate approach for setting peak and off-peak interconnection charges and therefore considers that the approach taken by BTC to set a single rate across all times of the day / week is appropriate for its fixed voice products. URCA would, however, review this approach if the retail pricing structure is amended.

Consultation Question 20:

Do you agree that it is appropriate for BTC to set a single rate in the RAIO across all times of the day / week for its fixed voice products? Please detail your response in full.

3.5 Treatment of joining services

BTC has not provided proposed charges for joining services. Rather, it has stated that the charges would be derived based on a 'firm estimate' provided to the access seeker. URCA understands this to mean that rates would be set on a case-by-case basis and without regulatory oversight. URCA is of the preliminary view that this is not appropriate and contrary to the final Guidelines requiring the SMP operator to publish such charges in its RAIO.

Whilst the cost of joining services could vary considerably depending on the characteristics of the individual links, BTC's proposal will create significant uncertainty for OLOs and is likely to increase the time required for operators to complete interconnection arrangements. Furthermore, BTC already provides joining services as part of its interconnection agreement with SRG. It is therefore not clear why BTC cannot reasonably derive charges for similar links. As such, URCA is of the preliminary view that BTC should provide cost oriented charges for joining services for all available links in its final RAIO.

Since publication of the draft RAIO, URCA has requested BTC to prepare and publish its proposed charges for joining services. BTC has subsequently confirmed, in writing, that it will provide these charges as part of its response to this consultation.

Consultation Question 21:

Do you agree that BTC should publish charges for joining services for all available links in its RAIO? Please detail your response in full.

4 Detailed Review of BTC's Proposed RAIO Charges

Section 4.2 of the Access and Interconnection Guidelines states that the charges offered by an SMP operator and included in its RAIO should be cost oriented. It defines cost oriented charges as those which allow an SMP operator to recover efficiently incurred costs, including a reasonable rate of return on capital employed.

In this Section of the consultation document, URCA reviews whether the charges proposed by BTC are consistent with the principle of cost orientation. URCA has not, at this stage, undertaken a detailed review of whether the proposed RAIO charges only reflect efficiently incurred costs. As such, going forward, further changes to the RAIO may need to be implemented based on the outcome of any efficiency analysis undertaken by URCA. This is further discussed in Section 4.1.

BTC has used four methods to determine the proposed charges:

- **RAIO charges based on accounting separation (AS) results.** For the following services, BTC has derived charges based on the results of its accounting separation exercise:
 - fixed call termination to geographic numbers;
 - fixed call termination to non-geographic numbers;
 - fixed call termination to mobile numbers;
 - call termination to emergency call services;
 - call origination to freephone numbers; and
 - national transit.
- **RAIO charges based on benchmarking.** For the following services, BTC has proposed a charge based on regional benchmarking of equivalent services offered by other fixed network operators:
 - international call transit;
 - call termination to automated ancillary services; and
 - call termination to directory enquiries.
- **RAIO charges based on retail-minus approach.** For the operator assistance service, BTC has proposed a charge based on a retail-minus approach.
- **RAIO charges based on internal costing analysis.** For the directory number inclusion service and the point of interconnection service, BTC has derived charges using internal costing and management information, rather than sourcing the RAIO charges from its AS model.

Following the approach taken by BTC, URCA has reviewed first the charges based on BTC's AS results, then those derived from regional benchmarks and finally, the charges based on other approaches. Where URCA has formed the preliminary view that BTC's proposed charge is not appropriate, URCA presents its recommendations for how the charge in question should be modified. Where it is possible, URCA presents an indicative revised charge which in its preliminary view reflects the principles laid out in the Guidelines. For the avoidance of doubt, BTC will need to recalculate the RAIO charges for these services, in line with URCA's required changes.

As part of its review, URCA has assessed the approach taken by BTC and then compared the proposed RAIO charges to those which prevail in other markets. Although there are a number of reasons why cost oriented charges may differ between jurisdictions, undertaking an international benchmark can provide a useful cross-check of rates.

4.1 Tariffs based on BTC's AS results

URCA's Access and Interconnection Guidelines require BTC's RAIO charges to be cost-oriented (i.e., allowing BTC to recover the efficiently incurred costs, including a reasonable rate of return on capital employed).²⁶

As part of its Final SMP Decision, dated April 22nd, 2010, URCA has imposed a requirement on BTC to prepare and submit separated accounts (on a historic cost basis) annually to URCA. This common regulatory obligation aims to facilitate URCA's understanding of the profitability of individual business units and services offered by BTC. This obligation further helps URCA monitor the requirement for BTC to set cost oriented, non-discriminatory interconnection charges in its RAIO. However, URCA is of the preliminary view that the AS results are not necessarily a reflection of an efficient cost level for BTC's service provision. Therefore, whilst the unit cost information from BTC's AS model should form a reasonable basis or starting point for setting charges for most of BTC's RAIO services, it is also important to ensure that BTC's proposed charges are based on efficiently incurred costs.

Furthermore, not all RAIO charges can be based on AS results. This is partly due to the separated accounts not containing all services required for the RAIO. (For example, the directory number inclusion service is not included in the AS results). However, BTC has also decided not to base selected additional RAIO services on its AS results, since not deeming the relevant unit cost information as being sufficient. The proposed charges for these services are discussed in more detail in subsequent Sections of this consultation document.

BTC has submitted its initial set of separated accounts to URCA and URCA is currently reviewing BTC's submission. This review is particularly important since URCA has waived the audit requirement for Cable Bahamas' and BTC's initial set of accounts. It is further important to note that BTC's draft RAIO charges are based on its initial AS submission and, as such, do not contain any potential required changes arising from URCA's review process.

Below, URCA provides a short overview of how the AS-based RAIO charges have been derived and what modifications may be needed. This is followed by a brief discussion on the appropriateness of BTC's AS results as a basis for the RAIO charges – this includes a benchmarking of interconnection tariffs and high-level analysis of BTC's efficiency. URCA concludes this Section by providing a set of options and recommended approach to following the RAIO charges that are based on BTC's AS.

4.1.1 Approach taken to derive AS-based RAIO charges

BTC's separated accounts provide, amongst others, fully distributed unit costs for a range of retail and wholesale services.²⁷ This includes most of the call-related services contained in BTC's draft

²⁶ Section 4.2 of the Final Access and Interconnection Guidelines, published on April 22nd, 2010 (ECS 14/2010).

²⁷ For a detailed list of reporting requirements (including the list of services for which unit costs need to be calculated), please refer to BTC's Final Accounting Separation Guidelines published by URCA on April 22nd 2010 (ECS 14/2010).

RAIO.²⁸ To calculate these service costs, BTC has derived unit costs for each network component within its fixed and mobile networks as well as route factors, reflecting each service's utilisation of these network components. The unit cost of each service is then calculated by multiplying the network component unit costs by the relevant route factor.

As such, the assumed network component unit costs and route factor values for each service are the key drivers of the RAIO charge. URCA has undertaken a full review of BTC's accounting separation methodology and results.²⁹ In this Section, URCA outlines the main issues arising from the review which impact on BTC's draft RAIO.

4.1.2 Allocation of costs to RAIO services

URCA's review of BTC's cost allocation processes has identified two important issues, which, in URCA's opinion, mean the proposed RAIO charges may not reflect the costs incurred in providing RAIO services. These are as follows:

- BTC's traffic volume conversion; and
- the unit cost calculation of BTC's Point of Interconnection (PoI) network component.

BTC's volume conversion

As part of the AS modelling, BTC is required to convert traffic volumes from all of its services into a common measure. For example, whereas calls are measured in minutes, leased lines are measured in numbers of lines and SMS in terms of numbers of texts. As a result, where two or more of these classes of service are using a particular network component, traffic volumes needed to be converted into a common measure. This conversion can be undertaken using one of two approaches:

- a) **Capacity-equivalent conversion factors.** The most common methodology involves identifying the capacity required to provide the different services using a common standard such as the number of T1s. This reflects that it is the capacity requirement which drives the dimensioning of the network, rather than total traffic volumes.
- b) **Traffic-equivalent conversion factors.** Under this approach service volumes are converted based on actual (or assumed) traffic utilisation. It does not, however, reflect the way in which the network is dimensioned.

In its AS model, BTC has adopted conversion factors based on traffic equivalent volumes. Hence, BTC takes no account of the intensity with which a particular service uses the network. This methodology raises concerns whether the unit cost outputs of the AS model are fully consistent with the principle of cost causation. This is because network costs are driven by capacity requirements (e.g., providing sufficient network capacity to meet busy hour traffic demands), rather than by total traffic volumes. It is also likely to result in an over-allocation of costs to voice services (i.e., including interconnection services). This is because BTC's current approach underestimates the share of total capacity required for data services relative to voice services. For example, when estimating the capacity required for its leased line services, BTC has converted each leased line by assuming,

²⁸ Note that not all call-rated RAIO services are currently based on BTC's separated accounting data. This is due to either some concerns about the unit cost results for a particular service or the separated accounts not containing the required disaggregation required for the RAIO service. Where relevant, this is discussed in more detail in the remainder of this Section.

²⁹ Due to the confidential nature of many elements of the AS information, URCA's findings are not publicly available.

amongst others, “2 hours per day of “full utilisation””.³⁰ However, leased lines are dedicated circuits where capacity is always available (i.e., 24 hours per day).³¹

URCA is, therefore, of the preliminary view that BTC should adopt a capacity based volume conversion approach, where volumes should be converted into capacity equivalents, ideally on a route by route basis.

Pol network component cost

As part of its AS modelling, BTC has defined a network component for its PoI. The PoI is the legal boundary between two networks and as such it is not necessarily a physical network element. But it is commonly defined in an AS model to allow an operator to allocate its interconnection-specific costs (i.e., operating costs) to services. Within its AS model, BTC allocates the PoI costs to all fixed interconnection services (i.e., those services currently using its PoI facilities).³²

BTC’s PoI costs include operating costs and fixed asset costs. It is important to ensure that these asset costs are not double-counted in the RAIO charges (i.e., in the RAIO charges for joining services, PoI services, and in conveyance services).

Furthermore, it is also important that these costs are allocated appropriately across conveyance services. The PoI network component currently accounts for a very high share of the proposed non-geographic fixed termination charges and therefore any misallocation of these costs could have a significant impact on the RAIO charges.

URCA’s review of the draft RAIO has highlighted that the largest share of the PoI total cost relates to operating expenditure. Based on information provided by BTC, URCA is of the preliminary view that most of these operating costs relate to non-PoI specific activities and should therefore not be solely allocated to this network component. For example, BTC appears to have allocated a large share of its general interconnection-related operating expenditure (including, for example, costs relating to its Legal and Regulatory department) to this network component.

In general, URCA is of the preliminary view that BTC should only include PoI specific costs in this network component. All remaining interconnection-related operating expenditures (which are not purely related to the PoI)³³ should be recovered across all its interconnection and retail products (i.e., all minutes that are conveyed or transited on BTC’s network). URCA is of the preliminary view that this will help ensure non-discriminatory access provision and facilitate effective competition (as it otherwise would not allow OLOs to compete on a level playing field). Furthermore, end-users, including those from BTC, ultimately benefit from enhanced competition and should therefore contribute to the cost of establishing these interconnect regimes. This approach would be in line with common practice elsewhere. For example, in 2004 Ofcom reviewed how BT should recover its

³⁰ BTC’s AS submission “Additional information on BTC AS model following URCA’s data request dated 30th June 2010”, dated 16 July 2010.

³¹ It is likely that a similar issue arises in respect to other line-based services such as broadband internet access. However, the information provided by BTC to date is insufficient to evaluate this concern further.

³² These include domestic and international call transit services, fixed and mobile call termination services, fixed and mobile off-net call services, call termination services to BTC’s directory enquiry service and call termination services to emergency services.

³³ This may include, amongst others, its costs of developing and managing interconnection products; the cost of managing its relationship with operators which purchase interconnect services; the administrative costs of dealing with orders for interconnect services; and the costs of billing interconnect services.

interconnection-specific operating costs for its narrowband services (referred to as product management, policy and planning (PPP) charges). After reviewing its six principles of cost recovery (cost causation, distribution of benefits, effective competition, practicality and reciprocity), Ofcom concluded that, in order to ensure effective competition, cost minimisation and distribution of benefits, BT should recover its PPP costs from all operators – including from itself.^{34 35 36}

Given the above, URCA has derived an estimate of the revised PoI network component unit cost. This estimate is based on the following principles:

- all PoI-specific costs (i.e., the PoI-specific depreciation and return and capital employed values as stated in BTC's AS Income Statements) are recovered from traffic that utilises the PoI network component; and
- all remaining costs allocated to the PoI network component within the AS model are recovered by all traffic terminating on BTC's fixed network.³⁷

Applying these principles leads to a reduction in the PoI network component unit cost of approximately 70%. URCA presents the implications of applying the revised network component unit cost on BTC's RAIO charges in Table 1 below.

The table below sets out the estimated impact of the required changes to BTC's draft RAIO charges, based on the revised PoI unit cost estimate only (as URCA cannot, at this point in time, accurately determine the impact of the revised volume conversion approach on BTC's RAIO charges). For the avoidance of doubt, assuming URCA's preliminary conclusion is conveyed in its final decision; BTC will need to recalculate charges reflecting URCA's required adjustments.

³⁴ For more details, please refer to Ofcom, *"Review of BT's product management, policy and planning (PPP) charge"*, published 30 July 2004.

³⁵ A similar decision was taken by the Irish regulatory authority (ODTR, now Comreg) in 2000, when it ruled that all "billing and carrier administration charges" incurred by eircom should be recovered through a 'per minute' charge on all relevant traffic (i.e., from eircom and OLOs) over eircom's network. [For further details, see ODTR, *"eircom's Reference Interconnect Offer - Decision Notice D7/00 & Report on the Consultation"*, published April, 2000.]

³⁶ The relevant share for mobile call related services (i.e., "Call origination to freephone numbers – Mobile" and "Transit across two Points of Interconnection to BTC's mobile network") is lower.

³⁷ This includes all fixed to fixed traffic, mobile to fixed traffic, call transit traffic and fixed call termination traffic.

Table 1. BTC’s AS based draft RAIO charges and required amendments – based on revised PoI unit cost estimate

RAIO service	Draft RAIO charge (cents per min)	Revised charge (cents per min)
Fixed call termination to geographic numbers – intra-island calls	2.68	1.58
Fixed call termination to geographic numbers – inter-island calls	3.35	2.25
Fixed call termination to non-geographic numbers	2.70	1.60
Call termination to mobile numbers (MTR)	7.24	7.24
Call termination to emergency call services	3.10	1.96
Call origination to freephone numbers – From mobile	10.61	9.51
Call origination to freephone numbers – From fixed	2.70	1.60
Transit across one Point of Interconnection (i.e. intra-island transit)	1.61	0.51
Transit between two Points of Interconnection (i.e. inter-island transit)	3.86	1.67
Transit across one Point of Interconnection to BTC’s mobile network	1.74	0.64
Transit across two Points of Interconnection to BTC’s mobile network	4.00	1.80

Source: BTC’s draft RAIO and URCA analysis

Consultation Question 22:

Do you agree that for its final RAIO, BTC should develop revised charges based on the amendments to its Accounting Separation model?

Please detail your response in full.

4.2 Appropriateness of the AS based RAIO Charges

Although providing information on the actual cost incurred by BTC in delivering the relevant service, the AS results do not necessarily provide information on the efficient level of cost incurred in providing these services. This is due to the AS model allocating BTC’s total costs to individual products and services. This means BTC’s (historic) total cost, which needs to reconcile back to its

statutory accounts, forms an input to the AS model. As such, the accounting separation exercise does not by itself remove any potential inefficiencies in BTC's operations and network structure.³⁸

To ensure that the tariffs only reflect costs that are efficiently incurred in providing the services it is thus necessary to:

- firstly benchmark these tariffs; and
- secondly, review whether BTC's costs base is likely to reflect an efficient level of costs.

URCA preliminary analysis of these issues is presented below.

4.2.1 Results of Interconnection Tariff Benchmarking³⁹

In reviewing the proposed interconnection charges in The Bahamas, URCA is interested in identifying the efficient cost for providing interconnection services in The Bahamas. The efficient level of these costs could differ from efficient cost levels in other countries and therefore interconnection charges in The Bahamas should not be based on those prevailing in other countries without careful consideration. Nevertheless, by identifying any proposed interconnection charges which are significantly out of line with comparators, the benchmarking can provide a useful input to the analysis of the proposed charges.

There are currently no similar companies to BTC in The Bahamas. To benchmark BTC's proposed interconnection charges URCA must, therefore, compare BTC's proposed RAIO charges to those levied by fixed and mobile network operators in other countries. Ideally, such comparisons should be made to countries which have similar observable characteristics to The Bahamas, as this will – to the extent possible – reduce the expected differences between cost levels in each country. URCA therefore compares interconnection charges in The Bahamas with the relevant charges in other Caribbean countries for which data is available. These countries are Anguilla, Barbados, Cayman Islands, Eastern Caribbean (ECTEL states), Jamaica, and Trinidad & Tobago. In addition, URCA also included in its study interconnection data from other island states, notably Bahrain, Guernsey, Jersey and Malta. In all cases, the interconnection rates of the operators used in URCA's benchmarking analysis (the former fixed and mobile network incumbent in each jurisdiction) are regulated according to principles of cost orientation.

Approach

The interconnection charges used in URCA's sample have been obtained from the approved reference offers of the incumbent operators in each jurisdiction and other information. To compare rates between countries URCA has then expressed all the charges in Bahamian dollars, using current exchange rates.

³⁸ At the industry workshop on the draft RAIO (held on 21 July 2010), URCA understood BTC as confirming that it has not made any adjustments with the AS modelling exercise to ensure that its AS results reflect an efficient cost level.

³⁹ Benchmarking is commonly used to compare the performance of one business to other businesses in the same industry, or even businesses in other industries with similar characteristics. In the case of interconnection charges, a benchmarking exercise can help provide an initial indication of whether the charges offered by a company appear reasonable. Benchmarking must be undertaken with care and any conclusions drawn from the analysis should also be made carefully.

Given the availability of data, it is possible to compare the interconnection charges for the following services:

- fixed call termination rates;
- fixed network transit;
- call termination to emergency services;
- call termination to directory enquiries; and
- mobile call termination rates.

Most of the services above are defined in the same way across countries. However, in certain cases where there are differences in definition, URCA is required to make assumptions in order to compare rates between countries. URCA describes the most common issues encountered and how it has addressed them below.

- a) To ensure consistency across countries, URCA has applied, where possible, the same assumptions as used by BTC in the benchmarking analyses underlying some of its draft RAIO charges.
- b) Some countries have flat interconnection charges (per minute) while in others the charge consists of a set-up charge (per call) plus a variable charge (per minute). In the case of the latter, URCA calculated an average (per minute) charge on the basis of a three minute call, which it used to compare with the flat (per minute) charge of others.
- c) An alternative complication is that interconnection charges may vary by time of day or day of the week. In countries where this is the case, URCA calculated an (unweighted) average charge for the service in question.
- d) Finally, the same service in one country may be disaggregated into several separate services in another country. For example, in some countries in URCA's benchmarking sample, calls to emergency services are divided according to type of emergency and charged differently. Where this is the case, URCA calculated an (unweighted) average charge for the relevant service.

Results

The benchmarking analysis shows that in most cases, the charges proposed by BTC are significantly above the rates prevailing in the other countries included in URCA's sample.

URCA also presents the indicative proposed revised RAIO charges, based on the issues identified during its review (as set out in Table 1 above). Although commonly lower than BTC's draft RAIO charges, the revised charges are still often above those experienced across the regional comparators.

4.2.2 Fixed Termination Rates (FTR)

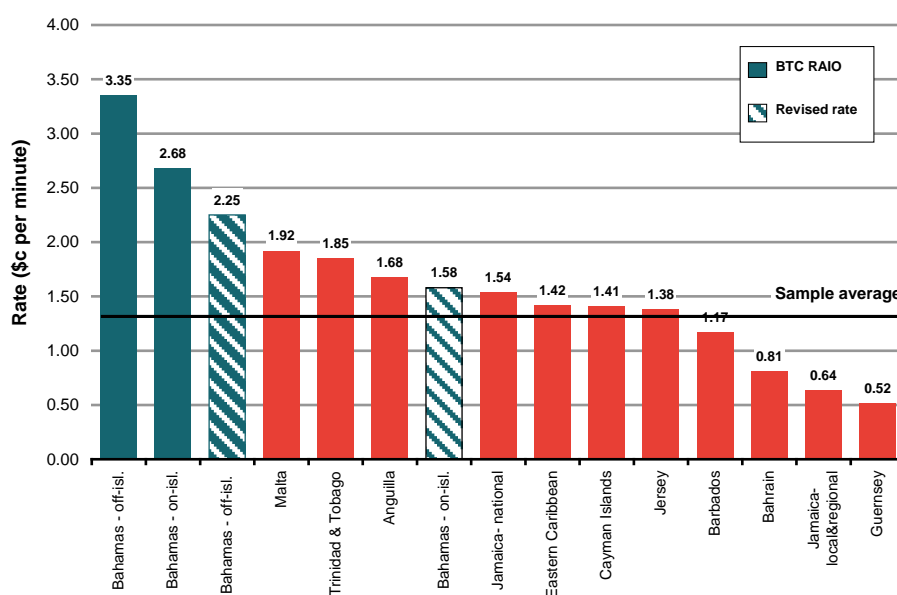
Figure 5 compares average interconnection charges (per minute) for calls terminating on the fixed network across the sample of benchmarking countries. Excluding The Bahamas, average FTRs range from 0.52 cents per minute (Guernsey) to 1.92 cents per minute (Malta). The corresponding charges

proposed by BTC are therefore significantly higher than those in any of URCA’s comparator countries.

BTC proposes different charges for calls terminating on the same island and calls terminating on another island. However, both on and off-island FTRs are higher than the FTRs in comparator countries. In fact, off-island FTRs in The Bahamas are more than twice as high as the sample average.

The estimated revised FTRs reflecting the adjustments to Pol costs are more in line with the fixed termination rates experienced elsewhere, with the revised on-island FTR being below the current FTR in Malta, Trinidad & Tobago and Anguilla. However, both revised charges still remain above the average charge across all comparator countries (i.e., excluding Bahamas).

Figure 5. Fixed termination rates (FTR)



Source: URCA analysis based on approved reference offers and other information (June 2010)

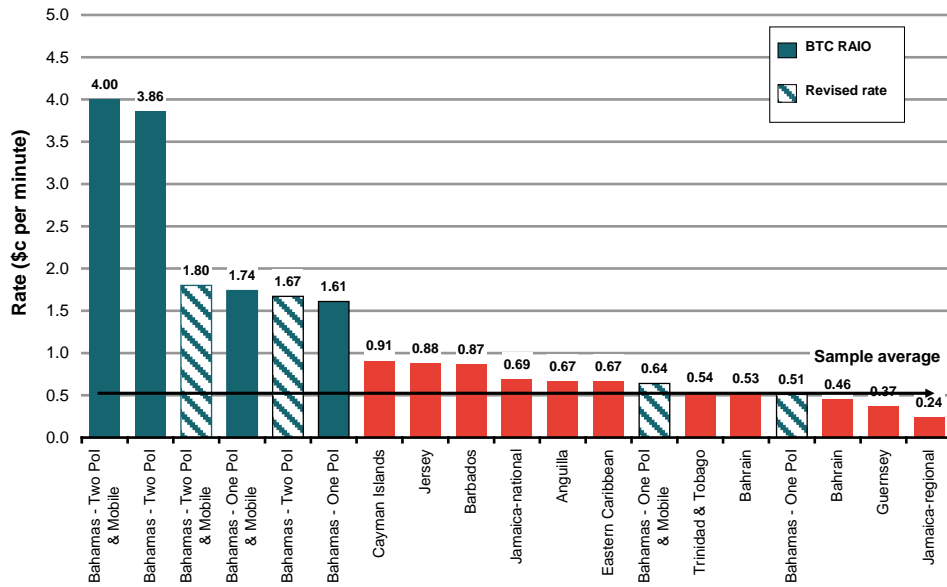
4.2.3 Fixed Network Transit

BTC has defined four separate network transit services and associated charges, depending on whether the call transits across one or two points of interconnection, and whether it is destined for BTC’s mobile network or another fixed network.

As shown below in , all the fixed network transit charges proposed by BTC appear very high compared with those in comparator countries. Calls using two Poles to either the fixed or mobile network have the highest charges but even those using only one Pole are very high relative to transit charges in other countries. For example, the sample average (excluding Bahamas) is 0.61 cents per minute, which is significantly lower than all four transit charges proposed by BTC.

Again, the estimated revised charges for single Pole transit services reflecting the adjustments to Pole costs are more in line with the charging levels experienced across the comparator countries. However, revised charges for BTC’s transit services using two Poles would still be the highest within the benchmarking sample.

Figure 6. Fixed network transit charges

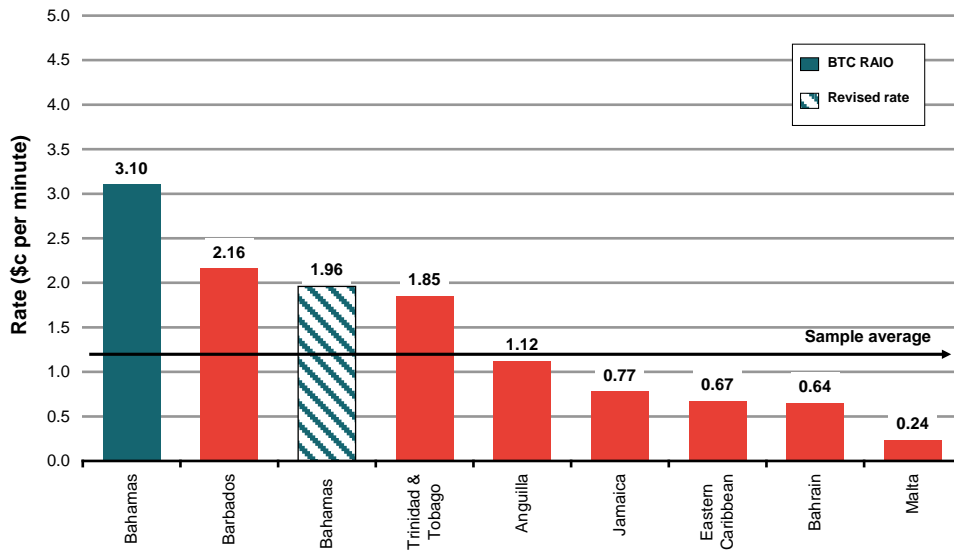


Source: URCA analysis based on approved reference offers and other information (June 2010)

4.2.4 Call termination to Emergency Services

A similar result emerges for termination rates for calls to Emergency Services. As shown in the graph below, BTC’s draft RAIO rate of 3.10 cents per minute is again the highest within the benchmarking sample. The estimated revised RAIO charge reflecting the adjustments to Poi costs would align BTC’s charge to those experienced in Barbados and Trinidad and Tobago. However, it would still represent the second highest charge within the benchmarking sample.

Figure 7. Call termination to Emergency Services

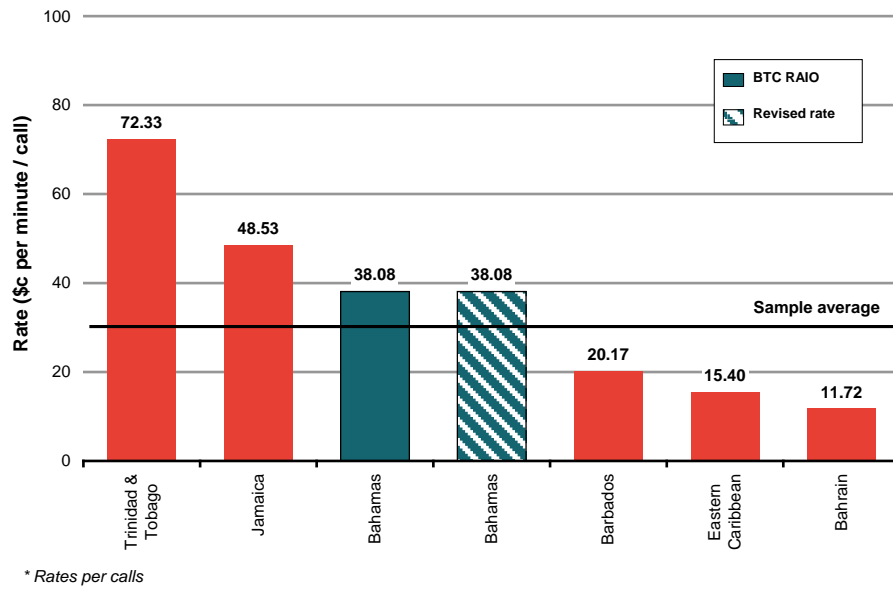


Source: URCA analysis based on approved reference offers and other information (June 2010)

4.2.5 Call termination to Directory Enquiries

URCA’s analysis shows that the proposed termination charges to Directory Enquiries in The Bahamas are more in line with those charged elsewhere (see below). This is commensurate with BTC proposing a charge based on benchmarking. However, note that termination charges to Directory Enquiries are not available for all countries included in the benchmarking sample. Furthermore, the underlying charging structure varies across jurisdictions. For example, the termination charges in Barbados and the Eastern Caribbean are levied on a per minute basis whereas all other countries within the sample have a per call charge. In order to take into account for some of these differences and to allow for a comparison to the information presented in the previous section, URCA has derived, where possible, average call charges based on the same assumptions as assumed by BTC in its analysis of directory enquiry call termination charges.

Figure 8. Call termination to Directory Enquiries



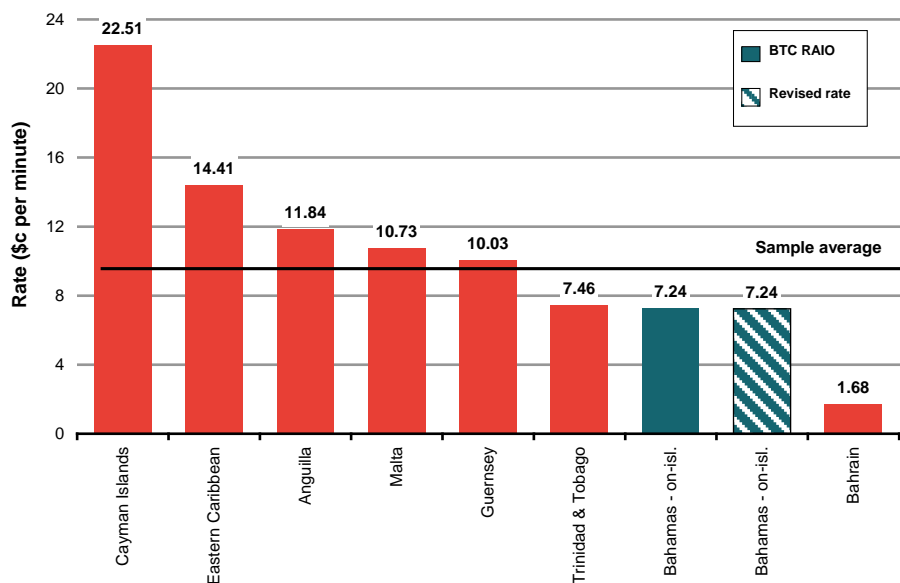
Source: URCA analysis based on approved reference offers and other information (June 2010)

4.2.6 Mobile call termination (MTRs)

BTC's draft RAIO contains an (on-island) mobile call termination charge of 7.24 cents per minute. This charge is lower than then MTRs charged in other Caribbean⁴⁰ jurisdictions, but significantly higher than the current MTR in Bahrain.

⁴⁰ Note that URCA used recommended MTRs as of 1 April 2010 for ECTEL member states.

Figure 9. Mobile call termination rates (MTRs)



Source: URCA analysis based on approved reference offers and other information (June 2010)

4.2.7 A High-Level Review of BTC’s Efficiency

As part of its review of BTC’s separated accounts, URCA has attempted to ascertain the extent to which BTC’s cost base reflects that of an efficient operator. An electronic communications network operator’s level of efficiency will be determined by a range of dimensions including, amongst others, its operating efficiency, and its network structure and traffic routing.

For example, the cost base used to derive RAIO charges should not reflect the costs of any excess spare network capacity. Whereas it is normal for operators to exhibit some spare capacity in order to cater for expected increases in demand and provide network resilience, it is important to assess the degree of spare capacity within a network as well as how it is treated within the AS cost allocation process.⁴¹

Determining BTC’s absolute efficiency would require a rigorous bottom-up assessment of its cost base and operations. Such exercises require applying sophisticated statistical and econometrics techniques, large data sets to compare efficiency with other operators, and therefore can take a few months to complete. As this is beyond the scope of this consultation document and the available

⁴¹ It is common for network operators to extend their installed network capacity over time, with recent increases in capacity likely to be driven by expected increases in demand for data services (rather than voice services). This is also likely to be the case for BTC. As such, it may not be reasonable to allocate the costs of all installed capacity using actual traffic levels, as this would effectively allocate primarily the costs of spare capacity to voice service (as the majority of BTC’s traffic is currently still related to voice rather than data services). This is despite the expected growth in data traffic being the likely driver of the increase in capacity and hence network costs.

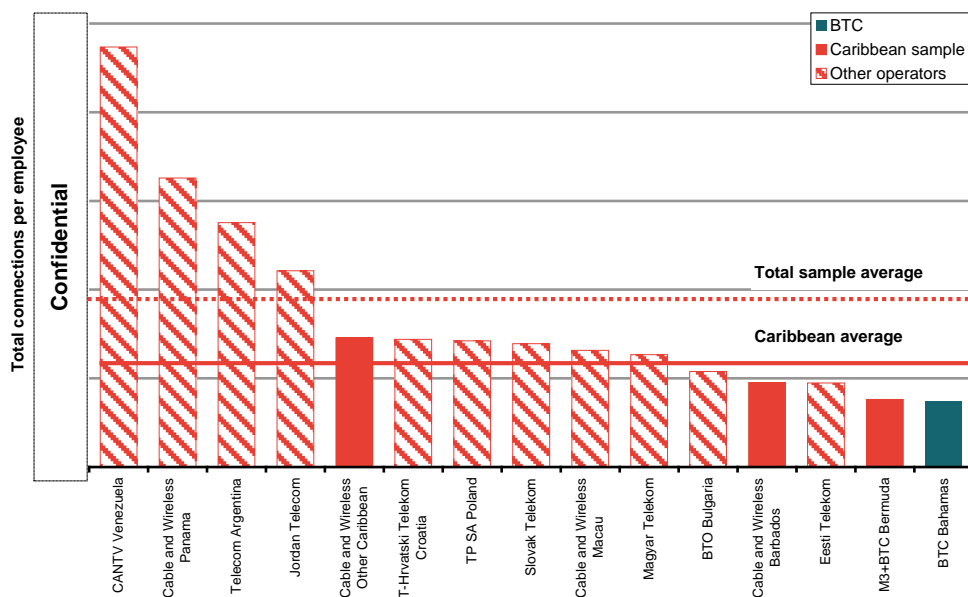
timeframe, URCA has instead undertaken an international benchmarking analysis of BTC’s relative cost and operational performance (presented below).

As part of its review, URCA has benchmarked BTC’s operational performance and total average costs to those exhibited by other fixed and mobile operators. URCA has assessed operational performance on the basis of “total connections per employee” measure and assessed average costs using various average cost bases (i.e., total cost per connection, total operating expenses per connection and net assets per connection).⁴²

These benchmarking analyses indicate that, in URCA’s preliminary view, BTC has relatively high unit costs and relatively fewer connections per employees than other operations.

For example, below presents the total (fixed and mobile) connections per employee for a range of operators. The graph shows that BTC exhibits the lowest total connections per employee value within the sample, including any of the Caribbean operators within the benchmarking sample. BTC’s total connections per employee are 63% below the sample average and 30% below the Caribbean average in the sample.

Figure 10. Total connections per employee benchmarking results

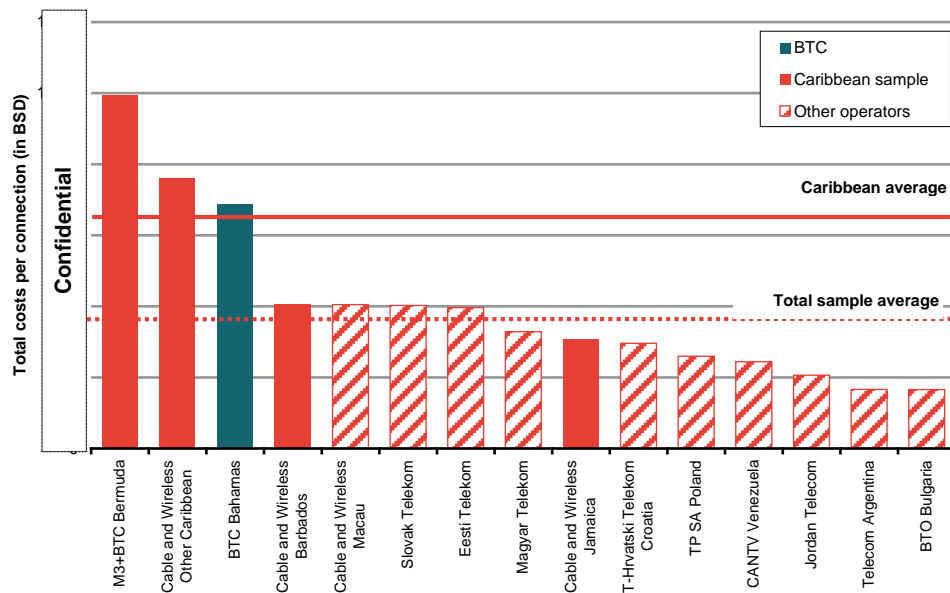


Source: URCA analysis based on ITU data and other publicly available information (August 2010)

⁴² In theory, efficiency should be measured based on total factor productivity (TFP): the ratio of an aggregate measure of output to an aggregate measure of inputs. TFP based approaches have been undertaken in regulatory contexts, particularly in the US. When (intra) national comparisons of TFP are not possible, the use of such approaches becomes challenging, as accounting data from different jurisdictions needs to be “normalised” and made comparable, prior to being used in any form of comparative analysis. In The Bahamas, BTC is the only significant operator and any comparison would therefore have to be international. As such, URCA considers a partial productivity analyses based on total connections per employee measure and total unit costs per connection measure provide an indicative overview of BTC’s relative performance. As stated below, further analysis is required to ensure that BTC’s costs incurred to provide the RAI0 service only reflect an efficient level of costs.

Furthermore, as presented below, BTC’s total unit cost per connection is the third highest within the entire benchmarking sample, with only the operator in Bermuda and ‘Cable and Wireless – Other Caribbean’ operations⁴³ reporting higher unit costs per connection. As such, BTC reports higher unit costs than regional operators and non-Caribbean operators within the sample.

Figure 11. Total cost per connection benchmarking results



Source: URCA analysis based on ITU data and other publicly available information

This initial analysis does not necessarily imply that BTC is inefficient as these differences in average costs and operational performance could be driven by the operating environment in The Bahamas. For example, providing services across a number of islands could add to BTC’s efficient cost base, compared to incumbent operators in other jurisdictions. However, this does indicate that there is a need for an in-depth assessment of whether BTC’s AS results used in its draft RAIO charges represent an efficient level of costs.

4.2.8 Main conclusions and key required changes to AS Based Tariffs

URCA’s review of BTC’s AS modelling exercise has revealed that its current AS results provide some basis for the RAIO charges. However, it appears to URCA that there are certain aspects of BTC’s current AS approach which need to be revised in order to ensure any resulting RAIO charges are cost

⁴³ Cable and Wireless only publishes financial information for a sub set of its Caribbean operations (i.e. Jamaica and Barbados), with the remainder only being reported within its total ‘Caribbean’ business segment. As such, for the unit cost benchmarking, URCA has developed a ‘Cable and Wireless – Other Caribbean’ business by netting out the financial and performance values reported for Barbados and Jamaica from the corresponding total Caribbean estimates reported in Cable and Wireless statutory accounts. However, no employment information was available for Cable and Wireless Jamaica. As such, it forms part of the ‘Cable and Wireless – Other Caribbean’ business within the operational performance benchmarking (i.e. Cable and Wireless Jamaica is not reported separately in the operational performance benchmarking graph above).

oriented. URCA's initial efficiency benchmarking analysis further indicates that BTC's cost base, and thus its AS-based RAIO charges, may not reflect an efficient cost level.

Therefore, to ensure that going forward, RAIO tariffs come in line with the Guidelines, URCA is of the preliminary view that it generally has three options at its disposal:

- a) **Option 1- Discard the AS results and Adopt Regional Benchmarks.** Given URCA's concerns identified above, it could instead require BTC to set the relevant charges based on alternative approaches, in particular international benchmarks. However, this would not ensure RAIO charges which are reflective of BTC's costs of delivering the relevant services and could make BTC not being able to recover an efficient level of costs. It would further limit the overall application of the accounting separation results in any regulatory proceeding. Further, the benchmarking methodology, sample and actual benchmark rates proposed are likely to take time to develop and likely to merit another public consultation. This would have the effect of further delaying the development of an interconnection regime.
- b) **Option 2 - Revised AS unit costs.** Alternatively, URCA could require BTC to implement revised RAIO charges based on the revised volume conversion approach and the augmented Pol network component unit costs (set out above). Although this would help overcome the cost allocation issues identified above, it would not necessarily ensure that the RAIO charges are reflective of an efficient level of costs. As set out in **Table 1** URCA estimates that adjusting the method for the recovery of interconnection related costs would result in reductions to the proposed fixed termination charges of around 40%, on average.
- c) **Option 3 - Require efficiency adjustments.** A third option would be for URCA to require BTC to adopt the revised RAIO charges, but also for URCA undertake a separate efficiency study. Once the efficiency analysis results are finalised, BTC would be required to publish revised RAIO charges, taking these adjustment factors into account. Due to the nature of such efficiency analysis this process is likely to require several months. Hence, it is possible to envisage two variants – (a) to require an efficiency study and adjustment now, thereby delaying the introduction of the approved RAIO; or (b) to require this in 2011, as part of an updated tariff schedule reflecting BTC's AS results based on BTC financial year 2010 (expected summer 2011).

Taking the available options presented above into account, URCA is minded to adopt Option 3(b) as part of the first RAIO review and approval process, with a view to concluding the RAIO process for 2010.

Consultation Question 23:

Do you agree with URCA's approach that where BTC has used the AS model for developing interconnection tariffs, these tariffs be used for 2010 (with appropriate adjustments for the cost allocation issues highlighted by URCA) and adjustments for efficiency be incorporated, in parallel with production of the AS model based on 2010 financials, from Summer 2011 onwards? Please detail your response in full.

4.3 Tariffs based on regional benchmarks

The following three of BTC's RAIO charges are based on regional benchmarks:

- Calls to Directory Enquiries
- Automated Ancillary Services
- International transit

Below URCA reviews each of these services in turn by setting out the approach taken by BTC, stating any concerns URCA may have with BTC's current approach, followed by a proposed revised RAIO charge.

4.3.1 Calls to Directory Services

BTC states that it cannot use its accounting separation information to develop the RAIO charges for this service as within its accounting separation exercise the cost of its call centres are not allocated to the relevant 'Directory Services'. Instead, BTC has used benchmarking to establish draft RAIO charge for this service, based on the charges contained in the following three reference offers:

- Cable & Wireless (C&W) Barbados;
- Cable & Wireless (C&W) Jamaica; and
- TSTT Trinidad and Tobago.

BTC calculates a charge per call (based on average duration of these calls on its network) for each operator and uses the simple average as the RAIO charge (i.e., 38.08 cents per call).

URCA is of the preliminary view that BTC's decision to develop this RAIO charge on the basis of a regional benchmarking analysis is only second best to adopting a cost-plus approach, based on BTC's efficiently incurred cost of providing this service. This is because it is not possible to assess whether the charges contained within the benchmarking sample actually reflect an efficient level of costs of providing this service in The Bahamas. Furthermore, URCA's review of the approach taken by BTC has revealed several concerns.

- **Significant variation in charges within sample.** The three benchmarks used in BTC's analysis have very different tariffs. For example, when converted into a common currency, C&W Jamaica's charge is almost three times larger than C&W Barbados' rate (59.78 cents per call vs. 20.17 cents per call). This has a significant bearing on the sample average and thus BTC's RAIO charge. However, URCA notes BTC's justification for the chosen sample (i.e., to ensure it is only comparing similar services as that offered by BTC).⁴⁴
- **Small benchmarking sample.** As stated above, BTC's justification for its limited sample size is to ensure that it only compares charges for similar services as to its own directory enquiry call service (i.e., an IVR-based service with operator back-up). URCA agrees, in principle, with this approach. However, based on a review of information received from a regulator in an ECTEL member state, URCA understands that the service specification of the directory enquiry service in question is identical to that offered by C&W Jamaica (used in BTC's benchmarking

⁴⁴ BTC states that three directory enquiry services contained in this benchmark are all IVR-based with operator back-up and as such, have a similar service specification as BTC's service offering.

analysis) and BTC's offering. As such, URCA proposes to include this ECTEL member state in the analysis.

- **Sourcing error.** URCA understands that the tariff quoted for TSTT Trinidad is a 'per call' charge and not a charge per minute, as stipulated by BTC. This leads to a significant understatement of the per call charge for Trinidad and Tobago. This is because, based on the average duration of the call (approximately 30 seconds), BTC assumes an OLO in Trinidad & Tobago would pay only around 34.28 cents (i.e., the assumed per minute charge divided by two). However, as the charge is actually per call, an OLO will always face the whole charge of 72.33 cents (irrespective of the actual length of the call).
- **Unapproved RAIO charges for Jamaica.** The rates used in BTC's calculations for C&W Jamaica appear to be from a draft reference offer (which is yet to be approved by the OUR).⁴⁵ These charges are significantly different from the current reference offer (i.e., RIO 5A, dated April 2004). BTC's calculations result in a per call charge of 59.78 cents while using the approved reference offer results in a lower charge of 48.53 cents.⁴⁶

URCA has undertaken a sensitivity analysis on the impact of its proposed revised approach on the RAIO charge, relative to the charge currently proposed by BTC. This check confirms that controlling for the issues discussed above has limited impact on the RAIO charge. As such, URCA is of the preliminary view to not require any changes to the draft RAIO charge for this year. However, from next year onwards, BTC should develop charges for this service based on AS unit cost results.

Consultation Question 24:

Do you agree with the URCA's proposal:

- (i) not to require BTC to change its draft RAIO charge for its calls to Directory Services for this year's RAIO; but
- (ii) to develop revised charges for this service, based on its AS unit cost results, in subsequent years.

Please detail your response in full.

⁴⁵ The source provided by BTC links to a reference offer, dated May 2003 (i.e., RIO 5). But the charges used in BTC's analysis do not correspond to the values in this document (RIO 5). Instead they appear to be from a revised reference offer (i.e., RIO 6), which the OUR consulted on in 2009, but has not been approved as of yet.

⁴⁶ The charge is based on a straight average of peak, off-peak and weekend charges. The Jamaican RIO further contains separate charges for regional and national call services. Within our analysis URCA has applied the regional charge as URCA understands that BTC's call centre, handling these calls is located in New Providence where most calls are likely to originate from. Taking a straight average of national calls would result in a charge of 49.22 cents for Jamaica.

4.3.2 Automated ancillary services

BTC states that it cannot derive cost-based RAIO charges for its 'Automated ancillary services' as these services do not form an output of its separated accounts. Instead, BTC has again used benchmarking to develop its RAIO charges for these services. BTC's RAIO charges are based on a single benchmark: C&W Jamaica's service for weather warnings, which BTC claims is similar to its ancillary services for Weather (915) and Time (917).

BTC's RAIO charges are further based on the average call duration for its Weather and Time services, based on the length of the automated announcement played as part of these services.

As stated previously, URCA is of the preliminary view that deriving a RAIO charge on the basis of benchmarking is only second best to a cost-based RAIO charge. Furthermore, as part of URCA's review, URCA was unable to replicate BTC's RAIO charge based on the stated benchmarking approach and has general concerns with BTC's approach:

- **Limited benchmarking sample.** URCA notes that undertaking a benchmarking analysis based on a single comparator entails the significant risk of over- or under-estimating the charge for the RAIO service under consideration. Any prevailing cost differences or differences in the service specifications between C&W Jamaica and BTC will lead to an incorrectly set charge for the RAIO service. However, URCA does recognise that, to its understanding, no other regional operator has included a comparable service in its reference offer or interconnection agreement. As such, it is not possible to improve the analysis by extending the benchmarking sample.
- **Sourcing error.** BTC's calculations are based on a call set-up charge of J\$ 0.45 per call while according to the reference offer this charge ought to be J\$ 4.543 per call.⁴⁷
- **Unapproved RAIO charges for Jamaica.** BTC again uses the rates contained in the unapproved reference offer from C&W Jamaica (i.e., RIO 6, as stated above).

In line with URCA's preliminary views on the previous service, URCA is of the preliminary view that BTC should derive its RAIO charges for these ancillary services on the C&W Jamaica service for weather warnings contained in its approved reference offer (i.e. RIO 5), rather than the charges currently used by BTC. This would result in RAIO charges for these two automated ancillary services as set out in the table below.⁴⁸

⁴⁷ Controlling for this error only would result in RAIO charges of 7.23 cents per call and 5.23 cents per call for the weather warning and time services, respectively.

⁴⁸ This assumes equal weights between peak, off-peak and weekend rates.

Table 2. BTC’s draft RAIO charges and revised charge – Automated Ancillary Services

RAIO service	Draft RAIO charge (cents per call)	Revised charge (cents per call)
Automated Ancillary Service - Weather (915)	2.70¢	1.10¢
Automated Ancillary Service - Time (917)	0.70¢	0.62¢

Source: BTC’s draft RAIO and URCA analysis

Consultation Question 25:

Do you agree with the revised approach and resulting RAIO charges for BTC’s Automated Ancillary charges (as set out in **Table 2**)? Please detail your response in full.

4.3.3 International transit service

Although this RAIO service could potentially be based on cost based charges from BTC’s separated accounts, BTC has proposed to develop the relevant charge on the basis of benchmarking. URCA understands that BTC has adopted this approach because it believes that the AS unit cost information for this service does not accurately reflect an efficient cost level. BTC has chosen to use C&W Jamaica as a suitable benchmark, resulting in its RAIO tariff of 1.11 cents per minute.

URCA is of the preliminary view that BTC’s decision not to use the AS unit cost as a basis for its RAIO charge, if the underlying costs are not reflective of an efficient cost level for this service, is appropriate. However, URCA also has several concerns with BTC’s benchmarking approach:

- **Limited benchmarking sample.** It remains unclear why BTC has chosen to limit the benchmarking sample to Jamaica only. There are also other Caribbean jurisdictions for which RAIO charges for this particular service are available. For example, the international transit rate in TSTT Trinidad & Tobago’s RAIO is TT\$ 0.035 per minute. This corresponds to 0.54 cents per minute (applying the exchange rates used in BTC’s analysis).
- **Unapproved RAIO charges for Jamaica.** As stated previously, BTC has based its benchmarking analysis on an unapproved reference offer from C&W Jamaica.
- **Calculation error.** The RAIO charge in C&W Jamaica’s unapproved RIO is J\$ 0.929 per minute. Applying the exchange rates used in BTC’s previous analyses results in a RAIO charge of 1.03 cents per minute, which is lower than BTC’s proposed rate of 1.11 cents per minute.

Given the above, URCA is of the preliminary view that BTC should adopt a RAIO charge of 0.75 cents per minute⁴⁹, instead of the current value of 1.11 cents per minute (as set out in **Table 3**).

Table 3. BTC’s draft RAIO charges and revised charge – International transit service

RAIO service	Draft RAIO charge (cents per min)	Revised charge (cents per min)
International call transit	1.11¢	0.75¢

Source: BTC’s draft RAIO and URCA analysis

Consultation Question 26:

Do you agree with the revised approach and resulting RAIO charges for BTC’s international transit charges (as set out in **Table 3**) Please detail your response in full.

4.4 RAIO charges based on retail minus approach

4.4.1 Operator assistance service

This RAIO service relates to the domestic operator assistance service only. BTC has derived its RAIO charge for this service by applying a ‘retail minus’ approach (i.e., by applying a percentage reduction to the relevant retail prices in line with the perceived share of total service costs it would save by providing the service on a wholesale rather than a retail basis). It argues that this approach is appropriate due to the contestability of this service (i.e., alternative operators could easily replicate the required call centres to offer similar retail services). BTC has applied a retail margin of 15% based on its “*general experience of reasonable margins between retail and wholesale services of this type*”. No further evidence in support of the applied retail margin has been provided.

URCA further notes that BTC has imposed a minimum call duration of three minutes per call for the draft RAIO service, based on BTC’s current retail structure for these services.

⁴⁹ This charge represents a straight average of the relevant charges contained in the TSTT and the (approved) C&W Jamaica RIOs.

Table 4. Operator assistance service retail prices and RAIO charges

	Person to Person service	Station to Station service
BTC retail charge	60 cents per minute	40 cents per minute
Assumed retail margin	15%	15%
RAIO charge⁵⁰	51 cents per minute	34 cents per minute

Source: BTC

The Access and Interconnection Guidelines recognise that “*specific products may be provided on a ‘retail minus’ basis*”.⁵¹ URCA further recognises that other regulatory authorities have applied a ‘retail minus’ approach when, amongst others, a service is deemed to be potentially contestable, as this reflects a ‘lower cost’ form of regulation and ensures that retail margins for new entrants are protected. Within its submission, BTC has argued that its operator assistance service is contestable and hence a ‘retail minus’ approach was appropriate.⁵² However, BTC’s argument is not in line with URCA’s final SMP Decision which considers the operator assistance service to be part of a market in which BTC is deemed to have market power. Furthermore, in a recent correspondence following the publication of the final Guidelines, URCA required BTC to derive its charges for the operator assistance service on a ‘cost plus’ basis. As such, BTC’s justification for using a ‘retail minus’ approach does not appear reasonable.

Similar to benchmarking, a ‘retail minus’ approach does not ensure that the RAIO charges reflect an efficient level of cost incurred in providing this service. This is particularly the case, as the applied retail margin is not BTC-specific, but rather based on “international experience”. As such, this may potentially lead to no demand for this service (in case the applied retail margin is too low) or inefficient entry (in case of the retail margin exceeding the retail cost of an efficient operator).

There is limited international evidence on the appropriate retail margin for this service. As such, it is not possible for URCA to appropriately assess the retail margin applied by BTC, nor to assess the appropriateness of the resulting RAIO charges (via, for example, an international benchmarking). However, URCA is of the preliminary view that a retail margin of 15% could be in line with common retail margins for other telecommunication services (such as leased line and bitstream access services).⁵³

⁵⁰ A minimum call duration of three minutes applies to these services, in line with similar requirements for the corresponding retail services.

⁵¹ Section 4.2 of the Final Access and Interconnection Guidelines, published on April 22nd, 2010

⁵² URCA notes that BTC has not argued in its submission that its current AS unit cost information is not “fit for purpose” for developing cost-based RAIO charges for its operator assistance services – as discussed above. Instead, BTC only justifies its choice of applying a ‘retail minus’ approach.

⁵³ For example, URCA understands that the monthly rental charge for Wholesale Leased Line (WLR) services in Italy are currently based on a ‘retail minus’ rate of -12%. The WLR charges in Sweden are also set based on a ‘retail minus’ approach (-21%).

As stated previously, URCA generally considers cost-based RAIO charges more appropriate than charges developed based on benchmarks or a 'retail minus' approach. Given the above, URCA would expect BTC to develop a cost-based RAIO charge for its operator assistance service. BTC's AS model provides unit cost information for operator assistance services. However, it is not clear that this can be used directly as the basis for a 'cost plus' interconnection charge. In particular, there are two issues when trying to develop cost-based RAIO charges for these services on the basis of BTC's AS unit cost information:

- **Aggregated unit cost information.** BTC only provides unit cost information for a single operator assistance service, whereas its retail and proposed RAIO services are further disaggregated into a "person to person" and "station to station" service.
- **AS service costs are presented on a retail basis.** BTC's AS service costs are developed on a retail, rather than wholesale, basis.

URCA, therefore, is of the preliminary view that the current AS unit cost information for operator assistance service does not form a suitable basis to set cost-based RAIO charges for this service. However, URCA does note that the AS unit cost result for this service is broadly in line with BTC's two proposed RAIO charges, based on the retail minus approach.⁵⁴

Therefore, given the structure of the current AS unit cost information for this service and the limited use of this service⁵⁵, URCA is of the preliminary view that it may be reasonable for URCA to accept the charges proposed by BTC for the initial RAIO. URCA would, however, require BTC to provide revised AS unit cost information (i.e., reflecting the RAIO service definition) for the operator assistance services in future, such that later RAIOS can include a cost-orientated charge.

URCA is of the further preliminary view that BTC's argument for imposing a minimum call duration on the charges for the draft RAIO service (i.e., by linking this requirement to a similar requirement contained in its corresponding retail price structure) is not sufficiently justified. To ensure that the overall charge complies with the principle of cost orientation, any minimum call duration requirement ought to be justified by underlying cost causation. BTC has not provided any evidence to demonstrate that this is the case. As such, URCA is of the preliminary view that this service should be charged on the same basis as other duration-based RAIO charges.

Consultation Question 27:

Do you agree with URCA's proposition

(i) not to require any changes to BTC's draft RAIO charges for its Operator Assistance service, but

(ii) to require BTC to remove minimum call duration (of three minutes) from this service?

Please detail your response in full.

⁵⁴ Given the confidential nature of the AS results, URCA can not present any unit cost results from BTC's AS modelling.

⁵⁵ Based on data provided by BTC within its AS submission, the total traffic volumes for this service were very low in 2009.

4.5 RAIO charges based on internal costing analysis

The draft RAIO services based on internal costing analysis are:

- directory number inclusion service; and
- point of interconnection facility charges.

For each of the two services URCA reviews BTC's current approach and proposes, where required, recommended changes to the proposed RAIO charges.

4.5.1 Directory number inclusion service

This service relates to the inclusion of OLO subscriber information into the BTC directory enquiry database. As part of its written response to URCA's queries on the draft RAIO, BTC has stated that the RAIO charge of \$3.07 per data entry for this service is based on two elements:

- **Assumed processing time for each entry.** It is assumed that OLOs will provide the relevant information to BTC via email on a case-by-case basis and that BTC employees then manually input this information into the relevant database. This process is estimated to require four minutes per customer entry.
- **Average staff cost per minute.** The RAIO charge for this service is calculated by multiplying the average processing time of four minutes by the estimated average fully loaded staff cost per minute (across all of BTC's employees).

BTC further confirmed that no asset costs have been included in this RAIO charge since these are fully recovered in the "Call Termination to Directory Enquiries" service.

URCA understands that estimating the cost of providing this service will require some form of bottom-up cost estimation, including certain assumptions on the time required to process each entry. However, URCA has the following observations on BTC's approach:

- **Data entry process.** BTC assumes that all requests are received via email and then processed individually. Although this may be accurate now, this does not necessarily resemble the most efficient way of processing these enquiries. This will particularly be the case as further competition emerges, resulting in an increased volume of these requests.
- **Average staff costs estimate.** URCA is of the preliminary view that the average staff cost across all BTC staff is not an appropriate base for this RAIO charge. This average staff cost represents a mix of employees which is not relevant to providing the number inclusion service. Instead, URCA is of the preliminary view that calculating the RAIO charge should be based on the call centre specific staff costs provided by BTC.

As stated above, based on the information provided by BTC, URCA has derived a revised RAIO charge for the directory number inclusion service. The key difference to BTC's approach is that URCA's calculation uses the cost centre specific staff costs, rather than BTC's fully loaded staff costs. Applying these average staff costs would lead to a reduced charge, which URCA estimates to be around \$1.91 per data entry

URCA is therefore of the preliminary view that BTC should be required to either provide further evidence on why its proposed charge is justified/cost-reflective or to reduce the RAIO charge to \$1.91 per data entry.

Consultation Question 28:

Do you agree that, in absence of further evidence on cost-reflectivity of its current charge, BTC should reduce the RAIO charge to \$1.91 per data entry? Please detail your response in full.

4.5.2 Points of interconnection

BTC's RAIO contains the following charging elements for its point of interconnection facilities:

- accommodation costs of \$100 per square foot per year;
- electricity charges, as charged by Bahamas Electricity Company; and
- any other charges (e.g., site preparation and other facilities and equipment) will be based on "firm estimates".

The accommodation cost estimate is based on the average rental cost of local office accommodation close to BTC's point of interconnection facility at Poinciana Drive in New Providence.

Main issues with current RAIO charges

Based on its review, URCA has the following concerns with BTC's proposed RAIO charges for its Pol services:

- **Pol specific cost estimates.** BTC's RAIO contains a general charging structure for its Pols. However, the accommodation charges are likely to differ significantly by location. Furthermore, BTC only operates two Pols. As such, it seems reasonable for BTC to provide separate, location-specific charges for each of its Pols. URCA is of the preliminary view that this approach is in line with common practice elsewhere.
- **Accommodation costs.** The rental charge of \$100 per square foot is based on office space. However, this is not necessarily an accurate reflection of the actual use of the required accommodation, which is commonly comprised of a combination of office space and other, less expensive, commercial space. For example, upon request, BTC has further provided to URCA the average rental cost of commercial space in Freeport, Grand Bahama (where BTC's second Pol is located), ranging from \$25 to \$30 per square foot. The latter estimates are significantly different to the \$100 estimate contained in BTC's draft RAIO. It is not clear, therefore, how the \$100 reconciles with the lower values. As such, URCA is of the preliminary view that a more accurate, Pol-specific average rental charge needs to be developed.

Given the above concerns, URCA is of the preliminary view, that BTC should be required to prepare, and publish, separate charges for its two PoI facilities in New Providence and Grand Bahama. These charges will contain location-specific accommodation cost estimates, which are reflective of the current utilisation of the relevant facilities (i.e., an average cost per square foot charge, weighted by the share of commercial and office space).

Consultation Question 29:

Do you agree that BTC should:

- (i) prepare, and publish, separate charges for its two PoI facilities in New Providence and Grand Bahama; and
- (ii) that these charges should contain location-specific accommodation cost estimates, which are reflective of the current utilisation of the relevant facilities (i.e., an average cost per square foot charge, weighted by the share of commercial and office space).?

Please detail your response in full.

5 Detailed Review of Draft RAIO Clauses

In this Section, URCA presents its comments on individual clauses in the draft RAIO, together with how, in URCA's preliminary view, the clauses should be amended by BTC to better reflect established practice. This includes detailed comments on the drafting of individual clauses.

Consultation Question 30:

Do you agree/disagree with URCA's identification of the issues and URCA's recommendations on the individual clauses in the draft RAIO?

Please detail your response in full, clause by clause.

Table 5. A Detailed review of BTC’s RAIO

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Introduction to Interconnection Agreement			
Pages 6 to 7 of Introduction to Interconnection Agreement	BTC has included information in the Introduction which is not binding or required.	It should be noted that although these pages do not form part of the reference offer, they could influence the way that other operators read the text.	The text in these pages should, therefore, be accurate.
Paragraph 3 of Introduction	“The [RAIO] and attached pro forma agreement ... continue in effect until superseded by a revised [RAIO]”	Refers to the agreement attached as being in force until superseded by a revised Reference Access and Interconnection Offer.	This text here should refer to an approved revised Reference Access and Interconnection Offer. This is to ensure that BTC does not seek to make changes/impose revised terms before these are approved by URCA.
Paragraph 4 of Introduction	“Operators ... must first enter into a Non-Disclosure Agreement with BTC”.	Refers to the Non-Disclosure Agreement that BTC enters into with other operators. A copy has been supplied to URCA following a request.	The NDA should be made publicly available so that other operators know what they will be asked to sign. In addition the NDA should make clear that it does not prevent any party from approaching URCA and if necessary seeking URCA’s intervention. Although this is not strictly speaking required as any such agreement is subservient to the provisions of the Communications Act and any URCA regulatory measures, the above provision should be expressly included in all future NDAs so that there can be no doubt to OLOs that signing the NDA it does not affect their rights to approach URCA and if necessary file a dispute resolution application, etc.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Paragraph 5 of Introduction	“Interconnection entails reciprocal rights and obligations”	Refers to reciprocal rights and obligations.	This should be removed in line with URCA’s comments regarding the reciprocity of the obligations between BTC and other operators.
Penultimate paragraph of Introduction	“Immediately following an amendment to the RAIO, the same change shall be made to an existing Interconnection Agreement”	Refers to changes being made automatically to any existing agreements if the RAIO is amended, subject to the specific decisions of URCA. However, the approval of a new RAIO could stipulate a later date for the introduction of certain provisions.	This paragraph should be qualified to say “unless URCA stipulates otherwise”.
Final paragraph of Introduction	“This [RAIO] shall be withdrawn ... if URCA formally determines that BTC no longer has [SMP] in that market ... [A]ny obligation to provide such services under the Interconnection Agreement shall cease”	Refers to the fact that should the RAIO obligation to provide services be removed the provision under the agreement shall also cease.	This should be amended to expressly state that the obligation to provide such services shall end with the end of the agreement between the parties and not the date of the decision that the service no longer has to be offered as part of BTC’s RAIO. This is to avoid the situation where BTC is no longer obligated to offer the service and can therefore remove it from the reference offer whilst at the same time an agreement exists where BTC has contractually agreed to offer the service at a specified price. If this is not amended, the potential exists for services to be terminated halfway through a contract because of regulatory changes. With the proposed change the operators will have the opportunity to negotiate commercially the provision of the service and relevant terms and conditions between the time of the removal of

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
			the obligation to offer the service and the existing agreement ending.
Main Terms and Conditions			
Heading of agreement	of Interconnection Agreement	The current agreement is headed 'Interconnection Agreement'.	The document should be headed as 'Access and Interconnection Agreement' to reflect the obligations of BTC. It should also be noted that this issue arises across the document where BTC only refers to an interconnection agreement and not to an access and interconnection agreement. The offer should therefore be reviewed to remove such inconsistencies or ensure that the definitions make it clear that the term 'interconnection agreement' includes interconnection and access services unless otherwise specified.
The parties	This Agreement is made between [BTC] and [Operator of (address)] ... sometimes collectively referred to as "Parties" or Operators" and individually as "Party" or "Operator"	As the draft agreement currently stands there is no defined term for the other operator.	BTC has removed the definition "access seeker", but should define the other operator by, for example, providing an abbreviation of the full operator's name. This is to ensure the appropriate clarity in the agreement.
3.2	Available interconnection services	Please see Section 2 for URCA's comments on the scope and reasonableness of the services included in the draft RAIO.	BTC to amend the draft RAIO in line with the provisional recommendations of Section 2 of this consultation document.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
6.1	The prices shall apply to the Interconnection Services irrespective of which Party is requesting access or interconnection services.	This provision would require non-SMP operators to offer BTC the same interconnection rates as BTC offers to non-SMP OLOs.	As set out in Section 2 above, URCA is of the preliminary view that it is not appropriate to include requirements for reciprocal charging within the RAIO. BTC should review the document to ensure that any other similar references are also removed.
8.2	Each Party shall use its best endeavours to adhere to the Quality of Service standards set out in Annex H – Quality of Service Standards.	URCA is of the preliminary view that ‘best endeavours’ is not appropriate. Each party should comply with the relevant standards. Occasional non-compliance would not be a cause for concern or compliance action, but continuing non-compliance (even with best endeavours) would be.	The clause should refer to compliance, not best endeavours.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
11	New Services: This section suggests that the Access Seeker can request a new service already included in the RAIO (11.1) or where BTC is dominant (11.2).	There is no scope to request other services which BTC might wish to offer on commercial terms.	The scope of Section 11 should include all services. BTC must specify how and the relevant timescales within which it will consider requests for new services not included in the RAIO. Following such consideration BTC should respond to the applicants – within set timescales - where it proposes to offer the requested service/ relevant terms and conditions (which shall be subject to URCA approval) or whether it does not consider that it has SMP in the relevant market and either is not prepared to offer the service or is prepared to offer it on a commercial basis.
12	Network Planning is based on the 3 year Network Plan, defined as “a diagram of the layout and structure of the Networks of the Parties, including the Points of Interconnection and Joining Circuits. It shall also show major changes proposed by a Party for its Network over the next three years”.	There appears to be no formal structure for the exchange of forecasts and ordering processes based on these, as typically found in RIOs.	This issue is dealt with in greater detail in Section 2 above: “Forecasting and Planning” BTC to amend the draft RAIO in line with the provisional recommendations of Section 2 of this consultation document.
13.2	Neither party can knowingly connect equipment or apparatus to its network that has not been approved by “the relevant approvals authority”	Reference is made to connecting equipment (including terminal equipment) not approved. Clarification needs to be provided as to the identity of the approval authority.	URCA proposes the text should be amended as follows: “Neither Party shall knowingly connect or permit the connection to its Network of any equipment or apparatus, including any terminal equipment that is not approved by URCA or by regulatory or other measures issued by URCA.”

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
16.2	Neither party can expressly or by omission or implication misrepresent their relationship or the services provided.	This clause prohibits each party making certain statements in relation to services offered in the retail market. It is not clear why clause 16.2.3 is included in that there should be no restriction on the operator making it clear to its customers, if it so wishes, that certain services are provided to it by another operator. It is also not clear what is the effect or result of a breach of this provision.	It may be appropriate that a provision is included in the RAIO which prohibits denigration. That is, operators should be prevented from denigrating other operators.
16.4	Cooperation and notification by one party to the other to detect and prevent fraud, theft or misuse of each other's services or equipment.	Clause does not say what is the effect or result of a breach of this provision	BTC should define what is to happen should one of the parties become aware of these situations and fails to cooperate with or notify the other party.
18.2.4 18.4.5 19.1.4	Interconnection services cease if the Other Party is bankrupt.	The current wording simply provides that a five days notice is given to URCA. In practice, URCA may well require interconnection to continue to allow the customers of the failed network to continue to use essential and emergency services. Equally, the Administrator may want to sell the company as a 'going concern'.	Suspension of services should only apply should URCA not object.
18.3.4	One party to an interconnection service shall not be liable to the other party for any damages or losses suffered by the	The clause provides for the effects of suspension and seeks to limit the liability resulting from the	This should not apply in cases where the suspension was wrongful. This is to ensure that the party seeking to suspend the services of

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
	second party arising from the suspension of service.	suspension of the service.	another operator appreciates the fact that if it transpires that the suspension was wrongful it may be liable to pay damages to the other party.
18.4.3 19.1.3 21.1.2 27.1	A party may suspend the agreement where the other party has ceased to operate as a provider of “telecommunications services” to customers.	Contextual or grammatical error regarding “telecommunications services”.	Replace “telecommunications” with “electronic communications”. The RAIO should be reviewed and where appropriate this change made in all relevant places.
18.4.4	A party may suspend the agreement where the other party has failed to provide or renew financial security under “Clause 26”.	Reference is made to Clause 26 of the Main Terms and Conditions which does not seem to relate to this sub-clause.	URCA presumes that Clause 18.4.4 should rather refer to Clause 24.
19.1.1	Termination of interconnection services and the interconnection agreement.	This clause provides that: <i>19.1.1 Where termination is warranted by the continuing failure of the other Party to take action to rectify a fault condition that threatens the safety of the <u>first</u> Party's Network in accordance with Clause 13.</i>	The word “first” should be amended to ensure that it covers not only BTC but also the other operator.
19.2.4	One party to an interconnection service shall not be liable to the other party for any losses suffered by the second party arising from termination of the service.	The clause provides for the effects of termination and seeks to limit the liability resulting from the termination of the service.	This clause should not apply in cases where the termination was wrongful. This is to ensure that the party seeking to terminate the services of another operator appreciates the fact that if it transpires that the termination was wrongful it may be liable to pay damages to the other

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
			party.
19.3.1	Provisions for terminating the agreement.	“Has been declared” appears twice.	Delete second occurrence.
19.4.3	On termination of the agreement under clause 19.3, the party whose agreement is being terminated is responsible for paying all direct costs incurred by both parties in removing equipment and cabling at all relevant Poles, switches, shared sites and shared facilities.	This clause implies that the Access Seeker will always be responsible for both parties’ direct costs of removing equipment and cabling.	This clause should be amended to ensure that each party is responsible for its own costs.
20	Force Majeure includes labour disputes	Labour disputes, unlike most Force Majeure events, are not wholly outside of BTC’s control and it may not be appropriate to allow such disputes to be so classified.	This should be amended to exclude cases which are within the sphere of influence of the party that fails to complete its obligations. The usual approach is to state “ <i>labour disputes falling outside its sphere of influence</i> ”. This would exclude, for example, management lock outs that are purely within the control of the licensee.
20.5	Force majeure for 6 months or less	Contextual or word omission from clause regarding reference to “20.2”	Insert “Clause” before “20.2”
21.1	Review of the agreement on the material modification of either party’s licence	Clause 21 seeks to provide for those cases where a party may seek to amend the agreement between them. The clause as it currently stands does not provide scope for negotiations arising from a change in the needs of the other operator or new services or circumstances as	This clause should be modified to allow other operators to seek to review the agreement in such cases.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		being grounds whereupon the other operator may seek a review.	
21.3	Initiation of a general review of the agreement on its anniversary date	This clause provides that a notice may be served for review on the anniversary of the day in clause 1. Clause 1 does not specify a date (we assume that this means the date of the agreement but this should be clarified). In addition setting the date for serving a review notice as the date of the contract could mean that the negotiations may only start after the agreement ends (assuming the agreement runs for a number of years).	The provision should be amended to allow for the notice to be served at any point in time that is no more than four months from the date that the current agreement between the parties will expire. This should allow for time to negotiate and if necessary refer issues to URCA.
21.4	BTC may review the terms in Annexes C, D, E and G and may issue a review notice at any time if it concludes that any of the terms in those Annexes should be varied.	<p>The current text provides for unilateral changes to be made by BTC to an agreement between parties which has received the prior approval of URCA.</p> <p>The clause does not specify the amount of prior notice for giving a Review Notice or under what circumstances BTC might issue such a notice.</p>	Unilateral changes cannot be made in these cases and the text should be amended. If BTC considers that there are cases where changes may need to be made to the annexes specified in this clause it should provide that such changes may be made subject to the prior written approval of URCA and that notice will be given to the other party in accordance with the approval received. It should also provide for notice to be given to the other operators of the changes required so that if they object they can raise such objections/concerns with URCA before it takes a decision on such changes.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
21.7	If after 3 months the parties have failed to reach agreement on the subject matter of a review notice, either party may pursue the dispute procedure in Annex F.	The 3 month period before invoking the dispute procedure might not be required in all circumstances.	The period of three months stipulated as a minimum period after which disputes procedures may be commenced should be qualified to allow for a reduction of the relevant period for cases whereby it is clear that no agreement can be reached between the parties.
21.8	Subject to the procedures approved by URCA, if any amendment is made to the [RAIO], the Parties shall be deemed to have agreed an equivalent amendment to the terms of this Agreement with effect from the date on which the amendment to the [RAIO] takes effect and no further formality shall be required to give effect to such an amendment ...	There may be cases of interconnection disputes where only the two parties involved are aware of the case and make representations to URCA. It would thus be unfair to others to be bound by such a decision if they have not been given the opportunity to put their views forward.	The clause should be amended to state “unless otherwise specified by URCA” to ensure that regulatory decisions can either be generic and apply to all interconnection agreements as currently specified or apply only to specific cases between two parties as it may be considered appropriate by URCA.
21.9	Amendments to contact details may be effected by informing the other party at any time.	The potential informality of amending contact details information.	Changes to contact details/information should be provided at least 24 hours before they become effective to ensure that they are up-to-date and no gaps arise between notification and changes becoming effective.
22.3	Disclosure of information to another party	Contextual or grammatical error as clause says “the first Party the other Party”.	Delete the words “the first Party”
23.5	Preservation of confidentiality of customer information passed between the interconnecting parties	Clause does not say what is the effect or result of a breach of this provision.	This issue arises in a number of areas – BTC should review the agreement and specify either on a clause by clause basis the implications of

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
			breaches or ensure that these are covered by the generic provisions of the agreement.
23.7	Retains effect of clause 23 for 60 months after termination or expiration of the agreement.	The period of 60 months provided as the time by which confidentiality provisions expire is inappropriate if information continues to be confidential after the end of the relevant period.	<p>The agreement should provide that the provisions shall remain in force in perpetuity for so long as information remains confidential. If BTC wishes, it can stipulate expressly the instances where the information ceases to be confidential/is not confidential (e.g.: where the information:</p> <ul style="list-style-type: none"> - has become public domain through no fault of the Receiving Party; - was already in the prior knowledge of the party, as evidenced by its records; - was lawfully received by a third party having the right to disseminate the information; - was independently developed by the Receiving Party; - was compelled by law to be disclosed pursuant to the requirement of a Government Agency or a Court Order; - ceases to be confidential due to other reasons objectively demonstrated).

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
24	Bank Guarantee	The Bank Guarantee can be for an amount up to 3 months of forward-looking revenues associated with the RAIO services.	<p>The clause raises, among others, the following issues:</p> <p>24.1 - It provides for a bank guarantee representing three months of forward-looking revenues, but does not take into account the financial obligations that BTC may have towards the other party. This should be amended to expressly state that the bank guarantee cannot be worth more than three months of forward looking revenues and must take into account amounts that will be payable to the other licensee, unless BTC provides a similar guarantee to the other licensee.</p> <p>24.1 - It does not take into account the financial standing of the company or previous dealings with the company as factors in setting the security level,</p> <p>24.1 - It provides that the financial security may be provided by means of a bank deposit guarantee or any other form of security “reasonably acceptable” to BTC. This should be amended so that the other operator can select the form of security to be provided, subject to it being in line with standard commercial practice in The Bahamas. This avoids the possibility of BTC selecting the form of guarantee to be provided, which may be more costly than other available options, so long as it protects its financial interests in line with</p>

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
			<p>standard commercial practice.</p> <p>24.2 - The quarterly review period appears to be rather short and a six-month period may be more appropriate.</p> <p>24.2 – The clause is not very clear as to the basis upon which the quarterly review will be carried out nor the process by which the result, if not satisfactory to one of the parties (most likely the Access Seeker), can be challenged.</p> <p>24.3 - This clause appears to be missing; renumber “24. ” as “24.3” and renumber sub-clauses as “24.3.1”, etc.</p> <p>24.3 - It should be made clear by the inclusion of the word “and” after sub-clause 24.3.1 that all the conditions must be met for the guarantee to be presented to the Bank for payment.</p> <p>24.5 – Renumber as “24.4”.</p>
26	Delivery and acknowledgment of receipt of written notices by paper-based and electronic means.	Mandatory requirement for the party receiving a notice to confirm receipt in the same manner as it was received, whether paper-based or electronic. Further, there is no stipulation as to what is to happen if the receiving party fails to confirm receipt within the specified period or	The current clause should be reviewed and revised to take into account URCA’s concerns regarding the presumed receipt of a letter or fax.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		<p>what is to happen if the receiving party confirms receipt outside of the specified 24-hour period.</p>	
<p>27</p>	<p>Limitation of liability</p>	<p>The current text concerning limitation of liability seeks to provide, wherever possible, elimination of the liability of BTC, since de facto BTC will be the main supplier of services.</p>	<p>The current clause should be reviewed and revised to take into account the following concerns:</p> <ul style="list-style-type: none"> a) A party may not limit its liability where the damage caused arises as a result of the wilful acts of the party responsible and in particular in cases of wilful misconduct, gross negligence, criminal activity, fraud, deliberate acts of sabotage by the Access Provider’s employees, etc. b) A clear stipulation should be provided that no party may exclude or limit its liability for anything which is not permitted by law. c) Clause 27.4 appears to seek to put the operators away from the jurisdiction of the courts if it is found that it was their fault that customers were unable to access emergency services and as a result the customers have a claim against the operators. This is not a normal provision and it should be deleted from the reference offer.
<p>28</p>	<p>Severability</p>	<p>The current text concerning severability is limited to such findings by “any court having jurisdiction”.</p>	<p>The current clause should provide that in addition to any court deciding that a provision is unenforceable, this would also include decisions by URCA, the Utilities Appeal</p>

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
			Tribunal, or other relevant bodies.
29.2	Assignment of rights, benefits and obligations under the agreement to any successor to one of the parties to the agreement that is granted a licence “to run the Network of the assigning Party”.	URCA does not grant licences to “run” specific networks.	This clause needs redrafting to take account of this fact.
30	The agreement constitutes the entire agreement between the parties and, unless agreed in writing between them, supersedes all previous agreements, whether oral or written.	The current text omits to mention the possible inclusion of regulatory or other measures issued by URCA.	A provision should be added to stipulate that, in addition to anything agreed in writing between the parties, elements binding both parties may also be found in regulatory or other measures issued by URCA and which specify this expressly.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Annex A – Service Schedules			
A.1.1 A.2.1 A.3.1	Calls include facsimile transmission.	Low speed data transmission should also be included (modems and DTMF keying)	Update all schedules to include data.
A.1.1	Termination of calls from international origins is specifically excluded from this Agreement.	This is both discriminatory and acts as a barrier to competition in international calls.	This is covered in detail in Section 2. Call termination should be provided to OLOs on a non-discriminatory basis irrespective of call origin.
A.1.1	The paragraphs on Call Handover mandate near-end or far-end handover.	Many RIOs no longer include such requirements. As long as Access Seekers pay for termination according to costs incurred, it should be reasonable for handover at any point – though in practice the price signals will promote the usual far-end/near-end handover as described.	The RAIO should be updated in line with the provisional recommendations on call handover set out in Section 2.
A.1.3 A.2.3 A.3.3 A.4.3 A.5.3 A.7.3 A.8.3 A.10.3 A.11.3	Supply conditions	Contextual or grammatical error concerning description of parties	Replace “The Parties” with “The Access Provider”. As this is an issue that arises across the document, BTC should review the document and make this correction wherever it occurs.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
A.1.5	Fault rectification and service restoration	The fault rectification should be non-discriminatory.	The fault rectification should clearly stipulate that faults shall be corrected in the same speed and priority as if they related to BTC's own network. This should be applied across all services offered (i.e., service provided at least of the same quality as for the party's own network).
A.1.9 A.2.9 A.3.9 A.4.9 A.5.9 A.7.9 A.8.10 A.10.9 A.11.10 A.12.11 A.13.22 A.13.29	Charging	Contextual or grammatical error concerning who is responsible for billings.	Replace "The Parties shall bill the other Party" with "The Access Provider shall bill the Access Seeker". As this is an issue that arises across the document, BTC should review the document and make this correction wherever it occurs.
A.3.9	The Access Seeker is to pay the Access Provider for conveying call termination traffic to mobile numbers.	As set out in Section 2, a mobile termination rate should not be charged where BTC also applies a receiving party pays regime for retail services.	The charging obligations for termination traffic on the access seeker's network should be removed, except where the call has originated outside The Bahamas (and hence where RPP does not apply).
A.4.8	Routing principles	Contextual or grammatical error	Replace "Termination Calls" with "Terminating

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		regarding terminating calls.	Calls” as occurs in A.1.8, A.2.8, and A.3.8.
A.5.1	Service definitions for directory enquiries service to the 916 “prefix”.	URCA questions whether the service description is complete and the use of the word “prefix” in relation to directory enquiries services.	The services described here should also include any other numbers specified by URCA in the Numbering Plan for use for Directory Enquiries. The word “prefix” does not appear to be correct as 916 is a short code.
A.5.2	Call handover	Grammatical error.	Remove second full-stop at end of clause.
A.6.2	Access provider will include access seeker’s subscriber information in its directories subject to “the same rules of listing and inclusion rules as apply to other listings and inclusions”.	The “rules of listing and inclusion” are not included in the draft RAIO.	URCA was given to understand from BTC that the “rules of listing and inclusion rules” could be found in the Company Policies section of the 2010 White Pages Telephone Directory. However, URCA was unable to identify such rules in the directory; therefore BTC should specifically incorporate these rules into the RAIO.
A.6.4	The Access Seeker is to provide the Access Provider with directory inclusion information, as specified by the Access Provider’s database administrator in electronic form and free of charge.	Whether the Access Seeker will charge for providing the information is a matter for the access seeker.	The section should be amended so that the data and format to be supplied is agreed between the two parties as it is not for BTC’s RAIO to specify that it should be free of charge. The Access Seeker may charge for the service provided. It would also seem more appropriate if the supply conditions for directory number inclusion were specified in the RAIO rather than left to BTC’s database administrator to specify.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
A.7	Operator assistance services including as service definition to the 0 “prefix”.	URCA questions whether the service description is complete and the use of the word “prefix” in this context.	<p>BTC should clarify this clause by describing the service provided, not the number used for the service. Further, the word “prefix” does not appear to be correct as ‘0’ (i.e., zero) is not a short code.</p> <p>The services described here should also include any other numbers specified by URCA in the numbering plan for use for Operator Services.</p>
A8.10	Charging: For the conveyance of Emergency Calls by the Access Provider is a public service, the Access Seeker shall pay the Access Provider a charge calculated in accordance with the rates as specified in Annex G - Price List. The Parties shall bill the other Party for this service in accordance with Annex F – Billing Processes.	There appears to be a grammatical error in this sentence.	BTC to clarify. Otherwise replace “For” at the beginning of the clause with “As”.
A.9.1	Service definition for Call Origination Service to Domestic Freephone Numbers	BTC omits to include a service definition and other specifications for a “Call Termination to Domestic Freephone Numbers” whereby calls originating on an Other Licensed Operator’s network terminate at domestic freephone numbers on BTC’s network.	Because BTC has been assigned the NXX Code for domestic freephone numbers (1-242-300-xxxx), BTC needs to devise a service description in the RAIO arising from the fact that it has to route calls to freephone numbers originating on an OLOs network and terminating on BTC’s network.
A.10.1	International Call Transit Service	This service excludes international	OLOs should have the same opportunity to pay

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		settlement and traffic arrangements.	the same for call termination in foreign countries as BTC as detailed in Section 2.2.2 above.
Diagram A9	Call direction of International Call Transit Service	This diagram omits to include call origination from the Access Seeker.	Revise the diagram to include call origination from the Access Seeker.
A.10.2 A.11.2	Call handover at the Pol agreed between the parties.	See Section 2.2.6 of the consultation document for URCA views on handover arrangements for call conveyance services.	BTC should remove any call handover requirements from its final RAIO as detailed in Section 2.2.6 above.
A10.9	BTC requires direct accounting for international transit calls.	This is unreasonable, and is likely to impose a significant cost on OLOs.	Cascade accounting should be provided, with the international transit service also covering far-end termination. This is discussed above in Section 2.
A.11.1	Service definition of National Call Transit service	It is unclear how the service definition of national call transit services applies to calls handed over to “the mobile network of the Access Provider” in light of the service definition in A.3.1.	Clarify how the service definition of national call transit services applies to calls handed over to “the mobile network of the Access Provider” in light of the service definition in A.3.1. The words “access provider” should be capitalised. BTC needs to define what it means by “MCS”.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
A11.10	BTC requires direct accounting for national transit traffic.	This may be reasonable when the number of OLOs is low, but direct accounting can become a barrier as the number of operators increase.	Consider the use of cascade accounting for national transit traffic. This is discussed above in Section 2.
A12	Joining Circuit Service is defined as being a T1 circuit.	At various places in the RAIO, the term 'Joining Circuit(s)' is used when the higher level transmission bearer is implied (e.g. a fibre or radio link working at DS3 or STM1/OC-3). Elsewhere the term is used when the interconnect traffic route is implied.	BTC to amend the draft RAIO in line with the preliminary recommendations in Section 2 above: "Joining Circuit Service".
A.12.3	Responsibility of the operators	Contextual or grammatical error regarding the identity or designation of each contracting parties.	Replace "The operator" with "The Access Seeker" and replace "the other Party" with "the Access Provider".
A12.4	Each operator is responsible for providing and maintaining the Joining Circuit from its Network to the mid-point of the Joining Circuit or as otherwise agreed between the Parties.	This is incorrect. The concept of mid-point is not appropriate to domestic interconnection circuits. The responsibility of each party is always up to the Point of Interconnection (Pol).	This clause should be amended to read: "Each operator is responsible for providing and maintaining the Joining Circuit from its Network to the Point of Interconnection."
A12.7	Unless otherwise agreed between the Parties, a minimum of two T1 interconnection circuits and two signalling circuits shall be provided on each Joining Circuits.	Another example of the incorrect usage of the term 'Joining Circuit'. If a JC is a T1 circuit, it cannot comprise two T1s.	This issue is dealt with in greater detail in Section 2 above: "Joining Circuit Service".
A.12.11	The Access Seeker and the Access	The text as currently drafted does	Needs to be amended to read "shall equally

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
	<p>Provider shall share the costs of providing the Joining Circuit as specified in Annex B, Clause B.7.3. The Parties shall bill the other party for this service in accordance with Annex F.</p>	<p>not appear to comply with Section 5.13 of the Final Access and Interconnection Guidelines.</p> <p>Contextual or grammatical error regarding who is responsible for billings.</p>	<p>share the costs” to comply with Section 5.13 of the Final Access and Interconnection Guidelines.</p> <p>Replace “Annex F” with “Annex E”.</p> <p>Replace “The Parties shall bill the other Party” with “BTC shall bill the Other Party”</p>

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
A12.12	'Dimensioning' of Joining Circuits.	Clause 12.12 partly duplicates what has already been stated in Clause 12.3. The clauses referenced in Annex H are mostly about provision and repair and not 'dimensioning' which is dealt with only in H3. In any event, it is not Joining Circuits that are dimensioned, but the Interconnect traffic routes carried over the collection of Joining Circuits.	This issue is dealt with in greater detail in Section 2 above: "Joining Circuit Service".
A12.14	Decommissioning of Joining Circuits	Section D14 suggests that Joining Circuits may be requested to be removed within 25 days. It is more common for any such reduction on network capacity to be subject to 3 months notice as part of the forecasting process. However, 25 days is appropriate if the JC is being re-established elsewhere, as it may fall within the provisions for Network Alterations.	This issue is dealt with in Section 2 above: "Forecasting and Planning"
A13.2	Unavailability of co-location space leads to offer of customer sited interconnection.	In-span interconnection (ISI) should also be considered.	A13.2 should be amended to include ISI.
A.13.3 A.13.5 A.13.25		Grammatical errors regarding capitalisation at the beginning of each sentence.	The word "the" at the beginning of each clause should be capitalised.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
A13.12	On site works is described	Facilities should be provided for a 'dirty area' where crated equipment can be unpacked prior to installation in the designated co-location area.	A13.2 should be amended to provide for temporary unpacking facilities.
A.13.13	The Access Provider shall rectify any damage in any way it deems fit, the cost and expense in connection with the damage including for the repair thereof shall be borne by the Access Seeker.	This clause fails to require the Access Provider to contain or reasonably manage the costs of repairing damage caused by the Access Seeker.	The clause should be revised to the following: "The Access Provider shall rectify any damage in the most appropriate way and the reasonably incurred costs in connection with the damage including for the repair thereof shall be borne by the Access Seeker."
A13.16	The Access Seeker shall comply with the Access Provider's standards for equipment installation.	No standards are quoted in the RAIO	A.13.16 should either include a reference to any such standards specified and approved by URCA, or it should be removed.
A13.24	"The Access Provider's equipment is placed in premises other than the premises in which the Point of Interconnection is located, and a Joining Circuit is provided between this equipment and the Point of Interconnection."	This statement is not correct in cases where the Joining Circuit is provided over a higher capacity transmission bearer. In such cases, the Access Provider's multiplex equipment is sited in a co-location area in the Access Seeker's building.	A.13.24 should be amended to clarify the location of any multiplex equipment.
A.13.25	[T]he Access Seeker is responsible for the sourcing and ordering of Customer Sited Interconnection space and services, for the maintenance of the equipment it places in this space.	This clause omits a charging clause similar to A.13.22 to specify who is responsible for what charges and should specify that the Access Provider will be billing the Access Seeker.	BTC to add a charging clause which states that the Access Provider will pay the Access Seeker (a negative charge).

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
A13.26	Physical arrangements for In-span interconnection.	In practice, ISI rarely requires a fibre splice, as the POI is a footway box close to one of the two buildings and a single fibre is drawn into the building concerned. If an optical distribution frame owned by the Access Seeker is employed, as suggested, then this would be a form of CSI, not ISI as ODFs are very rarely employed in footway boxes.	Clause 13.26 should be amended to reflect practical ISI solutions.
A13.29	“Each Party shall bear half of the costs of providing the In Span Interconnection Service”.	This division of costs is not reasonable in the very common case that the footway box POI is close to one of the two buildings (usually the Access Provider’s).	Clause A.13.29 should be amended to state that each party pays the costs up to the agreed POI. See also discussion in Section 2 above on “Joining Circuit Service”.
A.13.29	“The Parties shall bill the other Party for this service in accordance with Annex F”.	Contextual or grammatical error regarding the responsibility for billings. This clause needs to clarify what is the billing reference, what service it covers and when it is applicable.	Clarify what the billing reference refers to, what service it covers and when it is applicable. Replace “Annex F” with “Annex E”. Replace “The Parties shall bill the other Party” with “BTC shall bill the Other Party”.
Schedule 1 to Annex A	List of Services taken	Omits to include “Call Termination to Freephone Numbers” as a possible service.	Call terminations to freephone numbers should be included as a service

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Annex B – Ordering Process			
B.3.1	On receipt of a Service Request for an Interconnection Service the Access Provider shall examine the request and provide a Preliminary Response and a Considered Response to the Access Seeker.	This clause does not specify any timeframes for responding.	The Access Provider should confirm receipt of the Request within 24 hours. This is to avoid issues concerning receipt and resulting time commitments. Section B.3.2 needs to be amended accordingly.
B.3.2	“The Access Provider shall provide a preliminary Response within 5 Working Days containing at least the following information ... Additional information, if any, that is required by the Access Provider in order to finalise its assessment of the Service Request”.	Ensuring that requests for additional information are proper and are not used for delay purposes.	Amend the clause so that where additional information is required, the Access Provider should justify this by explaining why the additional information is required.
B.3.3	Additional information	Contextual or grammatical error regarding what additional information is being requested.	Request for “nominated additional information” seems incorrect.
B.3.6(b)	Initiation of the dispute resolution procedures by the Access Seeker where there is full rejection of a Service Request after 10 working days from the date of a Considered Response.	It is not clear why there is a provision that 10 days must elapse from the date of the response to initiate the dispute procedure.	A provision must be added that the dispute resolution procedure can be initiated by the date after a Considered Response is due and where one is not provided. This is to cover failures to respond.
B.3.7	Initiation of the dispute resolution procedures by the Access Seeker where there is joint consideration of a part acceptance of a Service Request after 15	It is not clear why there is a provision that 15 days must elapse from the date of the response to initiate the dispute procedure.	The comments made in B.3.6(b) above regarding the 10 days similarly apply in relation to the 15 days provided here in B.3.7.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
	working days from the date of a Considered Response.		
B.3.8(b)	Initiation of the dispute resolution procedures by the Access Seeker where the Access Provider advises that more time is required to assess a Service Request after 10 working days from the date of a Considered Response.	It is not clear why there is a provision that 10 days must elapse from the date of the response to initiate the dispute procedure.	The comments made in B.3.6(b) above regarding the days that must pass for the dispute resolution procedure to be commenced apply here in B.3.8(b) also.
B.5.1	Scope of provisioning processes for traffic services.	Omits to include “Call Termination to Freephone Numbers” as a possible service.	BTC to include “Call Termination to Freephone Numbers” as a possible service.
B.5.3	Planning and Forecasting	The details of how planning and forecasting are to be performed is not included.	See URCA’s comments above regarding “Forecasting and Planning”
B.6.11	“The Access Provider will acknowledge the receipt of the Advanced Facility Order within two Working days and indicate the deadline for the submission of the Firm Estimate.”	Omits to specify a reasonable time period for the deadline for submitting a firm estimate	Amend the clause to include a specified period for submitting a firm estimate to the Access Seeker to avoid the potential for delays.
B.6.12	“The Access Provider will then provide the Access Seeker with a Firm Estimate for the cost of providing the services requested and a firm delivery date. ... The Firm Estimate will be provided in the timescales set out in the Advanced Facility Order Acknowledgment.”	Omits to specify a reasonable time period for the deadline for providing a firm estimate or a firm delivery date	Amend the clause to include a specified period for providing a firm estimate or a firm delivery date to the Access Seeker to avoid the potential for delays.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
B.7.2	<p>“There is no need for a Service Request for additional circuits on an existing Joining Circuit Service. Where the Access Seeker requires additional capacity on an existing Joining Circuit Service, it will request confirmation that spare capacity exists on the link with a business letter to the Access Provider before submitting a Firm Capacity Order.”</p>	<p>Usually, traffic circuits are ordered and used in blocks of 24, corresponding to each 24 channel T1 circuit used for the Joining Circuit. Should the text shown left be interpreted as describing a situation where less than the full complement of 24 channels is activated, or is it describing the situation where an additional Joining Circuit is added to an existing higher level transmission bearer?</p>	<p>Clause 7.2 should be clarified. See also Section 2 above: “Joining Circuit Service”.</p>
B.7.3	<p>“On bi-directional Joining Circuits the costs set out in the Firm Estimate will be shared 50/50 between the Access Provider and the Access Seeker. On uni-directional Joining Circuits, all of the costs set out in the Firm Estimate will be borne by the Access Seeker.”</p>	<p>This clause does not comply with Section 5.13 of the Final Access and Interconnection Guidelines.</p>	<p>Clause should be amended to reflect that the costs are to be shared equally.</p>
B.7.3	<p>“The Access Provider will be responsible for deciding whether the Joining Circuit should be bi-directional or uni-directional.”</p>	<p>The decision to use uni-directional or bi-directional working should be made by mutual agreement and the Access provider should not have the right to dictate. Note again that uni- or bi-directional working refers to the interconnect traffic route, not a single Joining Circuit. In some countries, bi-directional working is welcomed on smaller routes,</p>	<p>Clause B7.3 should be amended to make the decision on route working to be mutual.</p>

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		whereas in others, its use is not allowed, in case mis-forecasting leads to one direction of traffic freezing out the other.	
B.7.11	"If Access Seeker or Access Provider requires the removal of Joining Circuits, an order identifying the Capacity and the date from which it should be removed may be placed by that Party on the other Party."	This section should apply only for requests addressed to BTC. The RAIO only relates to BTC's Obligations. Contextual or grammatical error regarding the identity of a party.	Clause B.7.11 should be amended to remove any references to reciprocity or symmetry of obligations by the Access Seeker. This is discussed further in Section 2 above. Amend "If accepted, The Party" to "If accepted, the Party" in the second sentence.
B.8.3	Non-discrimination	Contextual or grammatical error.	The word "following" at the beginning of the clause should be capitalised.
B.8.4	" Reciprocity: unless otherwise agreed by the Parties, a New Interconnection Service will be provided on a reciprocal basis".	It is not appropriate for the RAIO to include such direct obligations on the other party. The other operator may not have any regulatory obligation to so provide.	Clause B8.4 should be removed. Any policy on Reciprocity/Symmetry should be made by URCA and not included in the RAIO or Interconnect Agreement. This is discussed further in Section 2, above.
B.8.5	Form and Content of a New Interconnection Service Request	Contextual or grammatical error.	The word "the" at the beginning of the clause should be capitalised.
B.8.6	Preliminary Response	Contextual or grammatical error.	The word "on" at the beginning of the clause should be capitalised.
B.8.8	Additional Information	Contextual or grammatical error.	The word "where" at the beginning of the clause should be capitalised.
B.8.10	[W]ithin forty five (45) Working Days of	45 working days (i.e., 9 weeks) may	See URCA's comments above on Clause 11 of

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
	the receipt of the New Interconnection Service Request or of the date on which a reply is received to a request for additional information, whichever is the later, Access Provider shall give the Access Seeker the Considered Response.	not be reasonable for giving an Access Seeker a considered response on a new interconnection service request. Contextual or grammatical error.	the Main Terms and Conditions of the RAIO. The word “within” at the beginning of the clause should be capitalised.
B.8.11 B.8.12 B.8.13	Full Rejection; Unable to meet timescales; Part acceptance	Contextual or grammatical error.	The word “where” at the beginning of the clause should be capitalised.
B.8.11 B.8.12 B.8.14	“[W]ithin ten (10) Working Days from the date of the Considered Response the Access Seeker may initiate the dispute resolution procedures in the Interconnection Agreement” after full rejection, inability to meet timescales or more time is required by the Access Provider regarding a New Interconnection Services Request.	The period within which an Access Seeker may initiate a dispute procedure is too short.	BTC should amend the final RAIO by either extending the period for an Access Seeker to initiate the dispute resolution procedure, or remove the limitation periods.
B.8.13	“[A]fter thirty (30) Working Days from the date of the Considered Response the Access Seeker may initiate the dispute resolution procedures in the Interconnection Agreement” after part acceptance by the Access Provider regarding a New Interconnection Services Request.	No reason why 30 days must elapse from the Considered Response for a dispute to be initiated.	This 30-day period must be removed.
B.8.14	More time required	Contextual or grammatical errors.	The word “where” at the beginning of the clause should be capitalised.

Cross-reference
to draft RAIO

BTC proposal

Issue

Recommendation

Replace colon after “New Interconnection
Service Request” with a comma.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Annex C – Technical Specifications			
C1.1	Where these standards provide for alternatives, the alternatives will be those which are used by BTC.	While in practice, the SS7 options will be those used by BTC, this issue is only relevant for SS7 interconnect routes – other options could be used internally in another operator’s network. Ideally, the standards options for SS7 should be specified as a national matter for all interconnect routes in Bahamas.	The interconnect SS7 signalling will conform to the specification as endorsed by URCA.
C1.8	Refers to Recommendation G.732	G.732 is for E1 30 channel PCM systems. If T1 is normal transmission system in Bahamas, then G.733 applies.	Needs clarification.
C1.9	Refers to “Mobile 2 Specification Number 7 chapter 37”	Source for this standard is not referenced.	Clause to be amended to include source for this standard.
C1.11	Refers to Recommendation G.823	G.823 is for E1 systems. For T1 systems G.824 refers.	Clause to be amended to clarify correct Recommendation.
C1.12 & 13	Refers to Recommendation G.732	As C1.8 above	
C1.14	Refers to 2048kbit/s transmission and A law coding.	This refers to G.732 E1 transmission. T1 uses 1544kbit/s and Mu Law coding.	Needs amending for T1 environment.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
C2.2	Refers to Time Slot 16	TS16 is only used on E1 transmission systems.	Needs amending for T1 environment.
C4.4	The POI will forward the numbers in the form: ABC XXX XXXX	This statement is not true for calls to international destinations and calls using short codes.	Clause to be amended to include all possible digit formats.
C.5.4	“If a Party can demonstrate that the other Party is intentionally removing the CLI or Nature of Address from any Call originating from a domestic or international Caller and passing over a Joining Circuit, it may, after allowing the other party an opportunity to respond to its evidence, block all Calls without a CLI being sent to it by the other Party.”	Omits to specify a reasonable time period for the Other Party to respond to evidence.	<p>The clause must be amended to provide that:</p> <ul style="list-style-type: none"> a) before blocking such traffic BTC shall notify the other party of the date it proposes to do so; b) before blocking such traffic BTC shall notify URCA of the date it proposes to do so; c) such notice to be no less than 10 working days. <p>This is to ensure that notice is given to the other party and to URCA so that URCA may intervene if appropriate.</p>
Schedule 1 to Annex C	Signalling specifications	Annex C has only included statements about the use of SS7 for interconnection signalling. If SIP is offered, then this needs to be clarified and appropriately defined as a service alternative. Note however that ‘pure’ SIP may not meet all requirements for CLI and privacy.	Needs clarifying whether SIP is being offered or not.
Schedule 2	Network specifications	See C.1.4/C.1.5 above	Review and revise Schedule 2 to Annex C to ensure that it conforms to the specifications in

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
to Annex C			Clauses C.1.4 and C.1.5 of the draft RAIO.
Schedule 2 C-2.2	Transmission	The reference to CDR format seems anomalous in a section describing basic transmission.	CDR formats should be referenced under Billing.
Schedule 3 to Annex C: Interconnection Testing			
Schedule 3 C-3.3.1	“All the following tests with test calls in both directions across the Parties’ networks, According to the Services provided by the Parties to each other.”	It is not appropriate for the RAIO to impose direct obligations on the non-SMP operator. That operator may not have any regulatory obligation similar to BTC.	The clause must be amended so as to provide for the appropriate tests BUT it must not impose or imply any reciprocity obligations on the Access Seeker.
Schedule 3 C-3.3.4	Charging Tests	Error in sentence construction.	Combine text in fourth and fifth bullets.
Schedule 5 to Annex C			
Schedule 5 to Annex C	BTC network configuration	The network diagram is insufficiently detailed to read.	A better network diagram should be provided.
Annex D – Operations and Maintenance			
D.1.6	“The chairman of the meeting will be responsible for setting a date and location for the meeting, and for circulating an	It is difficult to see how a meeting can be called within 5 days of being requested (D.1.1.) and the agenda	It may be necessary to consider reducing the number of days for the circulation of the agenda.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
	agenda five Working Days in advance of the meeting.”	being circulated 5 workings days in advance as specified here.	
D.2.3	Sets out BTC’s proposed general principles for call handover at specified Points of Interconnection.	Call handover should not be specified in the draft RAIO.	<p>URCA proposes the text should be amended as follows:</p> <p>“Traffic may be handed by the Access Seeker to the Access Provider at any technically and economically reasonable point. The Access Provider shall provide to the Access Seeker, for each geographic number range, the closest POI for call termination.</p> <p>For the avoidance of doubt, unless otherwise agreed between the parties, the Access Seeker can hand over traffic at any POI it chooses. The Access Seeker shall notify the Access Provider of the POI it proposes to use for each type of traffic and shall only change such handover POI provided that it has provided written notice to the Access Provider of no less than 2 calendar months.”</p>
D.2.3(b)	Sets out BTC’s proposed call handover principles for certain specified call termination services.	Omits to include “Call Termination to Freephone Numbers” as a possible service	Call Termination to Freephone Numbers must be included as a possible service within BTC’s call handover processes as detailed in the revised text for Clause 2.3 above.
D.3.4	Handling congestion and unplanned network outages.	Contextual or grammatical error regarding the identity of a party.	Replace “Originating Operator” with “Access Seeker”

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
D.4.2	“Both Parties will work with each other and with URCA to have a special access code or number range that may be made available to Customers for the use of Mass Call Events.”	Short codes should only be made available in accordance with the National Numbering Plan.	This statement should be qualified so that it is clear that the allocation of numbering ranges and or short codes will be compliant with the URCA- approved National Numbering Plan.
D.5.1	“Any malicious call tracing must be initiated by Royal Bahamas Police Force ...”	This clause implies that only the Royal Bahamas Police Force can initiate malicious call tracings.	Provision should be made for initiation to be made by any authority empowered to do so by the laws of The Bahamas.
D.7.7	“Fault Priority: Each Party shall give priority to faults that: involve critical alarm in an exchange.”	Apparent error in the numbering of paragraph sub-clauses.	Revise paragraph numbering to include text on critical alarm as a sub-clause.
D.7.11	“If a Party notifies the other Party of a fault in the other Party’s Network (including the Joining Circuits for which it is responsible), and the fault notice is subsequently found to be erroneous, the first Party shall be liable for any costs incurred by the other Party as a result of the erroneous information.”	Omits to specify how the dispute resolution procedures apply to this clause. The clause also fails to recognise that a fault notification might be reasonably justified at the time it was given.	The clause should make clear whether the dispute resolution process applies in the event of a dispute over erroneous notification or costs. The clause should be qualified so that the provision only applies where the report was not reasonable. There may be cases where the facts available to a reasonable licensee, at the time of the report, are such that lead it to conclude that the fault is on the other network but which in due time transpires it was not. The penalty should apply to cases where the notification was not reasonably justified (e.g., no reasonable steps were taken to establish if the fault was on the notifying party’s own network).

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
D.8.2	Unplanned outages: “During the planned outage, the responsible Party must keep the other NOCs informed at regular intervals with the progress until full restoration of service whereupon the NOCs will note the outage duration. If the items are not restored to full service within the expected duration, the outage will be regarded as an unplanned outage occasioned by a planned outage and the procedure above for dealing with unplanned outages will be followed.”	Clause omits any stipulation by the responsible party to provide notification of full rectification of the outage.	At the end of the clause an addition should be made for the responsible party to notify the other party of the full rectification of the outage.
D.8.3	Planned outages: “If the items are not restored to full service within the expected duration, the outage will be regarded as an unplanned outage occasioned by a planned outage and the procedure above for dealing with unplanned outages will be followed.”	Omits mention of where, specifically, in the draft RAIO parties may find the procedures for dealing with unplanned outages.	Amend last part of clause to read “and the procedure in <u>Clause 8.2</u> above for dealing with unplanned outages will be followed”
D.8.5	Escalation process: “The Parties will agree an escalation process for faults that are not cleared within the timescales given in Annex H, Quality of Service, so that the problem can be drawn to the attention of more senior management.”	Omits to specify whether, or under what circumstances, the escalation process in Clause F.2.1 applies to uncleared faults.	Clause should specify that the escalation process in Clause F.2.1 will apply, or specify the procedure if different than that of Clause F.2.1.
D.9.1	“In the case of scheduled maintenance, the schedule of critical activities must be made available to NOCs in advance.”	Omits to specify a reasonable time period for notifying the NOC of the schedule of critical activities.	Review clause to include a time period for notifying the NOC of the schedule of critical activities.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
D.9.1	Refers to cataleptic outage	‘Cataleptic’ is not a commonly used word in telecommunications. However, since it is defined in the Annex I definitions, it should be capitalised so readers know it is a defined term.	Amend 9.2 wording to ‘Cataleptic’.
D.11.1	“Neither Party must do anything, or knowingly permit any third person to do anything, in relation to Network facilities, Network services or equipment which: ...”	Omits to include anything not done, whether by act or omission.	The clause should be amended to also require Parties “not do anything, by act or omission, or knowingly ...”
D.12.2 (D.11.2)	Notice of interference and rectification	Apparent error in numbering of paragraph sub-clause.	Change “D.12.2: Notification of interference and rectification” to “D.11.2 ...”.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
D.13.5	8 weeks notice for Network Alterations	<p>Network Alterations come in many forms, including those described in D.13.1. Some changes can be effected by ‘network grooming’ (reconfiguring what is already there) and data management amendments; and this type of change can be achieved in about 1 month. But other changes like closures of Poles, and relocating switches require much more substantial changes, which should have been highlighted in the Network Plan well in advance and may require around 7 months to achieve. Indeed, despite the wording of Clause D.13.5, Clause D.14.3 specifies 6 months notice for such major events. Experience suggests that even longer notice periods are appropriate when NGN related changes are concerned.</p>	<p>Clauses relating to Network Alteration notice periods need reviewing for consistency and appropriateness.</p>
D.14.4	<p>“Each Party shall bear its own costs associated with the decommissioning together with the direct costs incurred by that Party in respect of the establishment of alternative arrangements necessary to support the provision of interconnection services provided at the time of the decommissioning.”</p>	<p>Clause fails to recognise that the party responsible for decommissioning should be responsible for the costs incurred by the other party for decommissioning the existing site in addition to the costs of commissioning a new site.</p>	<p>Text to be clarified that the party responsible for decommissioning is responsible for the costs incurred by the other party for decommissioning the existing site in addition to the costs of commissioning a new site.</p>

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
D.16	Data amendments	Contextual or grammatical error requiring the title of the clause to conform to its subject matter.	Amend title to read “Data <u>management</u> amendments”
D.16.1	“The format of the [data management amendments] notice shall be agreed between the Parties.”	Avoidance of the potential for delays arising from having to agree the format of such a notice.	A standard form letter annexed to the RAIO could be employed to avoid the potential for delays
D.16.4	“In all other cases, the fees for Data Management Amendment requests will be agreed between the Parties, based on the hourly wage rate of the staff carrying out the amendments and the time taken to complete the task.”	This clause has overtones of reciprocity, which URCA deems unacceptable. Additionally, the appropriate staff rates are not specified in the RAIO.	Review and revise clause to remove any elements of reciprocity/symmetry of obligations. BTC should specify the wage rate for its staff carrying out Data Management Amendment requests in the final RAIO.
Schedule 1 to Annex D: Access to co-location sites			
Schedule 1 to Annex D D-1.2.1	Access process: Emergency access to co-location area	Omits to specify a reasonable time period for Access Provider to send Access Seeker a revised, updated list.	BTC to send the Access Seeker a revised, updated list of nominated contact staff and contact details within 24 hours of such changes.
Schedule 1 to Annex D D-1.2.2	Access process: Emergency access to co-location area	24 hours notice for emergency access is excessive. In a real emergency, a time not exceeding 4 hours is appropriate. Contextual or grammatical error regarding the identity of a party.	Clause D-1.2.2 should be amended to reduce the notice period in emergencies. Amend “The Access Seeker will notify the Access Seeker” to “The Access Seeker will notify the Access Provider”.
D-1.2.4	“The Access Provider may charge the Access Seeker for the cost of the	Omits to specify BTC’s costs of supervising an access visit and their	The costs for supervision of an access visit and the Access Provider’s standard hours of

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
	supervision associated with the access visit, and the charge may be increased to reflect the increased costs associated with: access visits occurring outside the Access Provider's standard hours of business ...”	standard hours of business for the purposes of access visits.	business should be known and clearly specified in the RAIO.
D-1.2.5	“The list of nominated staff will be available to the Access Provider electronically, and the Access Seeker will send the Access Provider a revised list whenever it is updated.”	Omits to specify a reasonable time period for Access Seeker to send Access Provider a revised, updated list.	The Access Seeker to send a revised, updated list of its staff who will undertake shared site visits to BTC within 24 hours of such changes.
Schedule 2 to Annex D	Sample (Joining Circuit) performance report	In line with comments in Section 3 above, the ‘traffic measures’ section of the sample report does not deal with Joining Circuit performance, but the interconnect traffic routes provided over them.	Terminology should be clarified.
Annex E – Billing			
E.2.1	List of usage based Interconnection Services	Omits to include “Call Termination to Freephone Numbers” as a possible service	See URCA’s comments elsewhere within the consultation document and this Section 6 on the need to include Call Termination to Freephone Numbers as a possible service.
E.2.9	“The Access Provider shall not bill for any services provided more than 12 Calendar Months prior to the date of the invoice.”	Billing for services provided up to 12 months prior to the invoice date.	The Access Provider should not charge for any services outside the billing period unless there are good reasons for doing so. A period of 12 months is long and needs to be justified if at all. This should cover retrospective charges as well

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
			as charges in advance.
E.3.10	“The Parties will agree arrangements to ensure that their clocks are synchronised for the purpose of billing peak and off-peak periods, if needed. Where a time discrepancy exists, the Access Provider’s CDRs shall be taken as the correct source unless proved otherwise by the Access Seeker.”	It is for the party claiming that its time calibration is correct to prove that this is the case by providing appropriate evidence, for example maintenance records, etc., and not the other way round.	Once the issue of a time discrepancy is raised by one party, based on a justified request, the other must prove the correct working of its clocks.
E.3.4	Floor space charge for physical co-location service on a ‘per meter’ basis	This is inconsistent with the draft RAIO charges presented in Annex G 13 where the site rental charge is quote in ‘per square feet’ terms	Inconsistency should be removed.
E.3.7	“The billing period is a calendar month unless otherwise determined by the Invoicing Party and notified to the Invoiced Party in advance.	Clause omits to say on what basis would Invoicing Party change from monthly billing period or how far in advance notice will be given of the intention to change to another billing period.	These issues should be clarified in the final RAIO.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
E4.2	Unsettled invoices	<p>7 days seems to be rather a short period at which to commence debt recovery procedures.</p> <p>Also omits to specify a reasonable time period before the Invoiced Party would be notified that the Invoicing Party will be taking action.</p>	URCA is seeking comments from all parties as to what is a reasonable period within the industry before commencing debt recovery procedures.
E.4.6	“The Party requesting the investigation will be liable for the cost of any test calls.”	Omits to specify what will be the reasonable costs of investigating test calls	BTC should specify in the final RAIO what its charges for investigating test calls are.
E6.1	Errors less than 2%	Although invoices which deviate less than 2% from expectations should be paid, parties should be able to insist that errors of whatever magnitude be investigated if requested. For example, a consistent over measurement of 2% would be of concern.	<p>It should be clarified that any level of error can be disputed.</p> <p>Amend last sentence of clause to read “within the time frames specified in Clause E.7”.</p>
E.6.4	“If the Invoicing Party verifies the overpayment, the Invoicing Party shall return the amount overpaid to the Invoiced Party.”	Omits to specify a reasonable time period within which the Invoicing Part will reimburse the Invoiced Party for overpayments.	BTC should specify in the final RAIO the period within which it will reimburse an Access Seeker for overpayments.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
E7.1	Acceptance of invoice correctness after 10 working days	The wording here would prevent an operator from challenging a small but persistent error that might only become evident after a pattern of several months.	Acceptance of an invoice for payment should not prevent a subsequent issue being raised.
E.7.8	“In the event that the Parties cannot agree on a firm of specialists ...	Change in terminology used in the subject clause.	Replace “firm of specialists” at beginning of clause with “firm of independent auditors”
E.7.14	“The Invoicing Party shall have the right to invoke Clause 14 of the General Terms and Conditions should the breach continue for another fifteen (15) Working Days.	Misidentification of Clause 14 and of the General Terms and Conditions.	Replace “Clause 14 of the General Terms and Conditions” (which relates to Numbering) with “Clause 17 of the Main Terms and Conditions” (which relates to Dispute Resolution).
E.7.16	Refund of an Invoicing Party’s initial payment to the Third Party Expert by a Disputing Party who loses a billing dispute.	As currently drafted, the Disputing Party gets no refund of the Third Party Expert’s fees from the Invoicing Party if it wins a billing dispute but refunds the Invoicing Party’s initial payment if it loses.	This clause needs to be consistent in requiring the losing party to refund the initial payment to the Third Party Expert. Provision should also be made so that the Arbitrator can award or decide the issue of the cost of the dispute between the parties as the Arbitrator considers fair and reasonable in the case.
E.7.17	“[N]either Party shall be entitled to withdraw there from	Contextual or grammatical error.	Amend “there from” to “therefrom”
E.7.18	“The Parties agree to keep the subject matter of their billing dispute and the evidence heard during any resolution by a Third Party Expert confidential ...	Contextual or grammatical error regarding the confidentiality of evidence before a Third Party Expert.	Replace “evidence heard” with “evidence submitted” as there is no oral hearing by the Third Party Expert.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
E.7.19	"[T]he Net Receiver shall have the right to raise a demand notice immediately and the Net Payer shall make payment within five (5) Working Days of the demand notice.	Contextual or grammatical error introducing terms not previously used in the draft RAIO.	Clause needs to define/explain who are "Net Receiver" and "Net Payer"
Schedule 2 to Annex E	Detailed billing verification information (CDRs)	In the first sentence, 'date' should read 'data'. In the sentence above Table E-2.2, there is reference to "the form in Table S.6.2" but no such table exists and probably refers to Table E-2.2.	Text to be corrected.
Annex F – Dispute Resolution			
F4	Use of independent arbitration and mediation	If the dispute concerns the regulatory obligations of a party, then resolution cannot admit the use of arbitration or mediation. Only URCA or the UAT can resolve such disputes and immediate escalation to URCA or the UAT should be provided for in such cases.	URCA's and the UAT's role in resolving regulatory disputes should be included in the RAIO.
F.4.1	"Should the Chief Executives of the Parties fail to reach unanimous agreement in the determination of any dispute referred to them as in Clause F.4 within fourteen (14) Calendar Days of such referral ..."	Replace "Clause F.4" with "Clause F.3". Omits to state what should happen if one or both parties conclude that the matter cannot be resolved by the CEOs, or if a CEO refuses to setup a	Text to be corrected. Also, if the Parties agree or one of the Parties considers that the matter cannot be resolved by the CEOs following the first meeting, that Party should be able to proceed to arbitration without waiting for 14 days. Also if any of the

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		meeting as requested.	CEOs refuses to set up a meeting within 48 working hours of being requested, the stipulation that a period of 2 days following a meeting should be amended to include 2 days following a request and a refusal of meeting by the other CEO.
F.4.2	“Notwithstanding anything to the contrary contained in this Clause F.4, neither Party shall be precluded from obtaining interim relief from a court of competent jurisdiction pending the decision of an arbitrator or mediator appointed pursuant to this Clause.”	Clause fails to consider the availability of other forums for seeking interim relief.	The clause should be amended to allow either party to seek interim relief from URCA or the UAT instead of a Court.
F5	Escalation to URCA	In urgent cases, it should be possible to escalate an issue to URCA before the times described.	Immediate escalation to URCA should be provided for. (In such cases, URCA could reject the issue and ask for the longer processes to stand).
F.5.1	“After the expiry of 30 Calendar Days after a dispute has been referred to the Chief Executives under step 3 above, either Party may refer the dispute to URCA”	The potentially lengthy period of time before a dispute can be referred to URCA.	The period of time before dispute can be referred to URCA needs to be reconsidered as it is much longer than the period specified for arbitration /mediation in clauses F.4.1 and F.4.2 and in any event it should be made clear that this is without prejudice to the rights and timescales provided to licensees under the Communications Act and any regulatory measures that may be issued by URCA from time to time.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
F.5.2	“Any decision in a Dispute which has been referred to URCA under Clause F.5.1 may be applied retrospectively to the date on which the Dispute was referred to URCA.”	Any decision by URCA may be applied from the date that URCA decides and not only from the date that the Dispute is referred to URCA.	The text must be amended to reflect that any decision by URCA may be applied from the date that URCA decides and not only from the date that the Dispute is referred to URCA.
Annex G – Price List			
G.7	Call Termination to Operator Assistance Service (cents per minute)	No justification exists why the minimum call duration should be three minutes.	The minimum call duration of three minutes should be removed as other licensees unless it can be justified based on principles of cost causality
G.12 Customer Sited Interconnection In-Span Interconnection	Charges for Joining Circuits, Customer Sited Interconnection and InSpan Interconnection	URCA considers the lack of specifications and charges as unacceptable.	BTC should be able to price the 2 Pols and joining services associated with those 2 Pols.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Annex H – Quality of Service Standards			
H.1.3	Both Parties will use their best endeavours to meet the quality of service standards set out in this Annex.	See URCA’s comments above on similar terminology used in Clause 8.2 (main document).	This clause should refer to compliance, not best endeavours.
H.3.1	Grade of Service	Grade of Service is a quality measure of the Interconnect traffic route, not of Joining Circuits. Because Pols are ‘pinch-points’ between operators’ networks, best practice would be to provide for a better GoS than 1%.	See Section 2 comments on Joining Circuits. URCA is seeking comments from all parties as to the level of Grade of Service on interconnection routes.
H.3.2	Availability of Joining Circuits	An availability of 99.5% implies a loss of over 43 hours each year. International benchmarking suggests that at least 99.8% should be achievable.	The reasonable input of all stakeholders on availability standards for joining circuits should be reflected in the RAIO.
H.3.3	Grade of Service: Exclusion of Customer Delays	While the availability figure of Clause H.3.2 (which is <i>not</i> a Grade of Service) might be affected by Customer Delays, this is not true of Grade of Service as described in Clause H.3.1	H3.3 should be reworded and only refer to the standard set out in H3.2.
H4.1/4.2	Network availability	The ANSI unsuccessful call ratio is a quality of service measure, not a grade of service. Furthermore, the use of this ratio and the target of 65% is not a measure of network	Network performance should be measured by the % of calls which fail due to congestion or faults and not as BTC have proposed.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
		availability or performance, since it can be significantly affected by customer behaviour – such as not answering the phone or by always having an answering machine to answer the call.	
H.5.3	Availability of Joining Circuits	Clause H.5.3 appears to duplicate Clause H.3.2.	Comments are invited so that appropriate availability standards for joining circuits are reflected in the RAIO.
H.6.1	“In order to allow for exceptional circumstances, a Grace Period shall be permitted before penalty payments are payable.”	<p>The Grace Period has the effect of extending the target dates.</p> <p>The penalties payable after the Grace period are too low and do not constitute an incentive to the Access Supplier to meet its targets.</p>	<p>The Grace Period should be removed. Either the target dates are correct and have to be complied with or they need to be reduced to allow for the Grace Periods.</p> <p>The penalties payable after the Grace period should be increased to act as a disincentive to delays.</p>
H.6.3	“The Access Seeker is responsible for initiating the reclaim of any penalty payments, which if agreed by the Access Provider, will appear as a credit on the next monthly invoice ...	The clause should specify the procedure that will be followed in resolving the dispute if the penalty is not agreed by the Access Seeker.	Review and revise text to incorporate such a procedure.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Annex I – Definitions			
Access Service	None	Not defined	See Interconnection service definition.
Data Management Amendments	Inclusion of CDR structure changes	Given the time scales referenced in the RAIO, it seems inappropriate to include changes of CDR structure within this definition. Any such structural change may require a longer notice period, as software development might be necessary.	CDR data structure changes should be classified as a Network Alteration and a notice period of at least 3 months provided for.
Emergency Services	Defined as “organisations providing police, fire or ambulance services.”	Definition omits several other emergency services organisations recognised in the Comms Act.	Extend definition clause to include the Royal Bahamas Police Force, the Royal Bahamas Defence Force, and the providers of fire brigade, ambulance, coast guard and other emergency services as may be specified by the laws of The Bahamas or by URCA.
i) Licensed Operator ii) Network	Each refers to “telecommunications” service or traffic.	Licensees under the Comms now provide “electronic communications services”	Amend text accordingly.
Partial Failure	Failure affecting more than 15% of the total number of ports in a PoI.	Set at 15% of the PoIs – with only 2 PoIs, URCA is unsure how failure is measured in this situation. URCA is uncertain whether a “Partial Failure” is the same as “partial outage”.	URCA requires the reasonable input of all stakeholders as to whether the 15% proposed by BTC is an acceptable standard in the industry.
i) Requested	Refers to who can request a “Data	Correct reference is to a “Data	Revise text accordingly.

Cross-reference to draft RAIO	BTC proposal	Issue	Recommendation
Party ii) Requesting Party	Amendment"	Management Amendment".	
Review Notice	Notice under Clause 21.	Insert word "means" between "Review Notice" and "a notice served ...".	Revise text accordingly.
Service Interrupting Fault	Fault resulting in degradation of service.	Capitalise "Service Affecting fault" at end of sentence.	Revise text accordingly.

Annexe 1: The Contents of BTC's Draft RAIO

In this Section of the consultation, URCA presents a checklist of the extent to which it appears that the draft RAIO covers all aspects required by URCA's Access and Interconnection Guidelines. This checklist is intended to provide a check on whether BTC has included in its draft RAIO all of the topics which the Guidelines require it to cover. From the review carried out it appears that the areas that were not included were:

- the requirements for OLOs to provide BTC with forecasts of interconnection capacity required, with BTC instead proposing that the interconnecting parties should engage in regular planning meetings;
- charges for joining circuits; and
- procedures for information storage and transmission.

However, the fact that the requirements of the Guidelines are covered does not imply that BTC's draft RAIO is necessarily fit for purpose. As set out in the preceding Sections of this consultation document, URCA has identified a number of areas where the draft RAIO, although covering the topics required by the guidelines, does not appear to reflect established practice and which it considers could limit the ability of new entrants and access seekers to compete effectively in the relevant markets. In addition, a number of the service descriptions and proposed processes also appear to fall short of the intention of the Guidelines.

The Guidelines also require RAIOs to be 'fair and reasonable' and to support the development of 'sustainable competition to the benefit of persons in The Bahamas and the national economy'. Therefore, a RAIO can only reasonably be judged to be compliant with these guidelines if the individual terms and conditions in the RAIO are consistent with these objectives.

Table 6. Cross-check of BTC draft RAIO with requirements set out in Access an Interconnection Guidelines

Guidelines cross-ref	Requirement	BTC RAIO	Covered in draft RAIO
5.2	RAIO should have three basic sections: <ul style="list-style-type: none"> - Main legal body - Legally binding schedules - Legally binding annexes 	BTC’s RAIO includes a main legal body, annexes and schedules.	BTC’s RAIO includes a main legal body, annexes and schedules.
5.3	The main body must at a minimum include the following clauses <ul style="list-style-type: none"> - Recitals - Definitions and applicability - Scope of access / interconnection - New services provisions - Forecasting, ordering and provisioning - Operations and maintenance - Systems changes - Services - Charges, variation of charges - Billing and payment - Infrastructure sharing, CLI, numbering, provision of information - Service performance and standards - Use of directory information, IPR - Review and amendments, breach suspension 	All the required clauses are included in the RAIO. In many cases, these are set out in the main legal body of the document, with cross references to relevant annexes	Each clause is covered in the draft RAIO. However, this does not imply that each clause is necessarily fit for purpose or reflects best practice URCA’s comments on individual clauses are set out in the preceding Sections of this consultation document.

	and termination		
	- Force majeure, liability, general legal clauses		
	- Dispute resolution scheme		
5.4	Legally binding schedules should include	Schedules and / or annexes are included in the draft RAIO to cover all of these topics	Each topic is covered in the draft RAIO. However, this does not imply that each schedule and/or annexe is necessarily fit for purpose or reflects best practice.
	- Definitions		
	- Billing and payments		
	- Service descriptions		
	- Service level agreements		
	- Schedule of services taken		
	- Price list		URCA's comments on individual clauses are set out in the preceding Sections of this consultation document.
5.5	Legally binding annexes should include	Annexes are included on technical specifications, operations and maintenance requirements and processes and procedures for managing interconnection between the parties.	Each annexe is included in the draft RAIO.
	- Technical specifications		However, this does not imply that each annexe is necessarily fit for purpose or reflects best practice.
	- Operations and maintenance requirements		
	- Processes and procedures		URCA's comments on individual annexes are set out in the preceding Sections of this consultation document.
5.6	Service schedules should provide a description of the RAIO services. Each service offered should form an individual sub-schedule.	Service schedules are included in Annex A	Yes. Annex A includes a separate service schedule for each RAIO service.
5.7	Each service description should include	Service schedules are included in Annex A	URCA's comments on specific aspects of the service schedules are set out in Section 2, above.
	- What the service does		
	- How it is provided		
	- What the access seeker needs to do to access the service		
	- How the access seeker may and may not use the service		

5.7	<p>Each service description should include the following clauses</p> <ul style="list-style-type: none"> - Obligation to supply - Limitation of technical scope - Technical interfaces - Non-discrimination - Fault management - Any specific routing principles - Any specific quality of service parameters - Charging principles and parameters - Parameters for billing and payment 	<p>The service schedules refer to a number of other schedules or annexes, which set out the detailed conditions under which each service shall be offered</p>	<p>URCA's comments on specific aspects of the service schedules are set out in Section 2, above.</p>
5.8	<p>Section on process for launching new services should include</p> <ul style="list-style-type: none"> - Timescales for reviewing request for new services - Timescales for negotiation and development of a new service - Timescales for processing a new service request - Pro forma documents for requests for new services, service specification and other critical correspondence 	<p>Timescales for reviewing request for new services – Annex B.8</p> <p>Forms for requesting interconnection included as schedules to Annex B</p>	
5.9	<p>Minimum service level agreement provisions should include:</p> <ul style="list-style-type: none"> - Definition of service quality criteria for all services and quality of service levels both parties are required to meet - Procedures for forecasting capacity and volume of traffic between the parties 	<p>Standards for call and joining circuit availability in Annex H.3 and H.4</p> <p>Forecasting procedures are not included in the RAIO but replaced with regular planning meetings</p> <p>Penalty provisions for both delays in provisioning and service repair are set out in Annex H.6</p>	<p>URCA's comments on the proposed forecasting arrangements are presented in the preceding Sections of this consultation document.</p>

	<ul style="list-style-type: none"> - Penalty payments for delays in service provisioning and/or testing - Penalty payments regarding fault repair times 		
5.10	<p>Billing requirements and processes should at a minimum include:</p> <ul style="list-style-type: none"> - Procedures for calculating and invoicing charges - Responsibility for customer billing, collection and bad debts - Data collection and invoice processing - Billing principles and timeframes - Processes for billing validation - Requirements for retaining billing information 	All billing processes are described in Annex E	
5.11	Charges should be cost oriented and derived using the accounting separation and cost accounting guidelines issued by URCA	All charges are set out in Annex G	URCA's review of the extent to which charges are cost oriented is set out in Section 4 of this consultation document. Note that not all charges are based on the outputs of BTC's accounting separation exercise.
5.12	Where URCA requires that charges be based on a 'retail minus' principle, the level of the discount against the SMP licensee's retail price must be fair and reasonable and reflect the SMP licensee's avoidable costs.	All charges are set out in Annex G	URCA understands BTC has used retail-minus to derive charges for the operator assistance service. This is reviewed further in Section 4 above.
5.13	<p>Enabling services such as joining circuits and co-location should be provided on a cost oriented basis. The RAIO should reflect the following principles for joining circuits:</p> <ul style="list-style-type: none"> - The RAIO should allow for installing new equipment if the cost would be lower than leasing existing equipment - If the access seeker can install new equipment at 	Processes related to the sharing of joining circuit costs, and the use of lower cost alternatives is included in Annex B7.3 and B7.4	Comments on the proposed arrangements are included in Section 3.5 of this consultation document.

	<p>a lower cost, the SMP licensee must consider this alternative</p> <ul style="list-style-type: none"> - Charges for joining circuits must be shared equally between the parties. 		
5.14	It is the responsibility of the SMP operator to demonstrate its charges are consistent with URCA's charging principles	N/A	N/A
5.15	<p>The RAIO must contain a comprehensive list of charges for each facility and service covered set out in a tariff schedule. For non-call services these must include:</p> <ul style="list-style-type: none"> - The type and volume of co-location space provided - All elements for enabling services (power, air conditioning etc) <p>The principles for call services must include:</p> <ul style="list-style-type: none"> - The point at which charges are applied to each call - Any time of day differences in charges - Any differences for local, national and international traffic. 	<p>Tariff schedule is included in the RAIO in Annex G. This includes details of the charging regime for conveyance and non-conveyance services</p>	<p>Charges for co-location space are charged per square foot, with other charges based on cost pass-through from other utilities.</p> <p>Charges for conveyance services are not differentiated by time of day, although some are split between on-island and off-island.</p> <p>URCA's review of all the charges is included in Section 4 of this consultation document.</p>
5.16	<p>The RAIO must include processes for:</p> <ul style="list-style-type: none"> - dealing with additional costs outside those in the tariff schedule - the SMP licensee wishing to amend tariffs or impose additional charges 	Process for reviewing tariffs set out in Clause 21	
5.17	<p>The RAIO should reflect the following technical standards:</p> <ul style="list-style-type: none"> - Each party should manage capacity / connection 	Processes and responsibilities for fault and capacity management set out in Annex D	URCA's comments on the proposed forecasting arrangements are presented in the preceding Sections of this consultation document.

	<p>on its own network</p> <ul style="list-style-type: none"> - Each party should advise the other of faults or planned maintenance which could affect services - Each should supply the other with reasonable forecasts 	<p>Forecasting procedures are not included in the RAIO but replaced with regular planning meetings</p>	
5.18	<p>The RAIO should describe the Technical Standards and Specifications applicable to both parties for the services and facilities offered. These should be consistent with the principle that access and interconnection should not be unnecessarily constrained by technical obstacles or limitations that have no justifiable or objective basis.</p>	<p>Technical standards are presented in Annex C and associated schedules</p>	
5.19	<p>At a minimum, technical standards should include:</p> <ul style="list-style-type: none"> - Functional characteristics of the system or equipment; - Electrical characteristics; - Configuration; - Signalling; - Traffic handling principles; and - A schedule of POI sites, by type (i.e., In Span Interconnect (ISI), Customer Sited Interconnect (CSI), and Co-location). 	<p>These technical standards are all set out in Annexes C and D of the draft RAIO.</p>	<p>The draft RAIO proposes points of interconnect on Grand Bahama and New Providence</p>
5.20	<p>The RAIO should include detailed processes for:</p> <ul style="list-style-type: none"> - requesting each type of POI; - installing and maintaining equipment at POI sites, including testing and acceptance; - responsibility for planning, providing, operating and maintaining equipment and facilities at a POI; and 	<p>The processes for an OLO to request a new point of interconnect , and the processes for installing and maintaining equipment at the POI are set out in the POI service description, together with Annex B.7 (ordering processes for joining circuits)</p>	<p>URCA's comments on the proposed clauses related to joining circuits and points of interconnect are set out in Section 2 of this consultation document.</p>

	- procedures for acceptance testing, operations and maintenance of equipment at a POI.		
5.21	<p>Technical Standards and Specifications should stipulate the procedures for adding, moving or removing POIs, including:</p> <ul style="list-style-type: none"> - The criteria and procedure for deciding where a new POI may be added or where POIs can be moved or removed; - The procedure by which another licensee may request a new POI; - The procedure for notifying other licensees of changes to POIs; and - The procedure for carrying out changes to PIs, including testing procedures and supplier responsibilities, once the change to a POI has been agreed by the parties. 	<p>BTC states it does not anticipate adding any new POI unless requested by an OLO.</p> <p>However, process for an OLO to request a new POI included in Annex B.6</p> <p>Further, processes for decommissioning or altering a POI set out in Annex D.13 and D.14</p>	
5.22	<p>The RAIO should set out requirements for information exchange, including;</p> <ul style="list-style-type: none"> - Subscriber and billing information - Caller line identification (CLI) information - Numbering schemes - Performance reporting and interconnection resolution logs - Co-location 	<p>Information exchange covered in a number of areas:</p> <ul style="list-style-type: none"> - Subscriber and billing info – Annex E.2.2 - CLI information – clause 14.2 - Numbering plans – clause 14.1 - Performance reporting – Annex D Schedule 2 - Access to co-location sites – Annex D Schedule 1 	
5.23	<p>The RAIO should set out procedures the SMP licensee will impose upon itself to ensure it does not misuse commercially sensitive information, setting out:</p> <ul style="list-style-type: none"> - Type of information considered commercially sensitive 	<p>Provisions around the treatment of confidential information set out in Clause 23.</p>	<p>BTC states in its RAIO compliance guideline that RAIOS do not normally set out procedures for information storage and transmission</p> <p>Clause 23 appears to relate equally to both parties to an interconnection agreement, rather than to the SMP operator.</p>

	<ul style="list-style-type: none"> - Purposes for which SMP operator may use the information - Limitations on the disclosure of the information - Procedures for storing and transmitting the information 		
5.24	<p>The RAIO should describe how other licensed operators should request interconnection and access services from the SMP operator, including;</p> <ul style="list-style-type: none"> - Description of the letter of application and information to be supplied - Process for assessing applications including timeframe and notification process - Process for negotiations on the RAIO 	Annex B (and associated schedules) describe processes for requesting and negotiating new interconnection services, including process (and timing) for access provider to review request	
5.25	<p>The RAIO should describe how parties can make changes to their interconnection agreements, including:</p> <ul style="list-style-type: none"> - Provision of additional circuits and carriage services; - Provision of additional POIs; - Changes by either party to their system, equipment or procedures in ways which affect the agreement; - Inclusion of additional services (for example, to reflect changes to the RAIO, market liberalization, or technological/market changes); - Changes to agreed charges and/or pricing approaches for services and facilities. 	Clauses 11 and 12 in the main agreement, and Annex B (and associated schedules) describe processes for requesting and negotiating new interconnection services, including process (and timing) for access provider to review request	<p>Each clause is covered in the draft RAIO. However, this does not imply that each clause is necessarily fit for purpose or reflects best practice</p> <p>URCA's comments on individual clauses are set out in the preceding Sections of this consultation document.</p>
5.26	<p>For each of these the RAIO should describe</p> <ul style="list-style-type: none"> - The process and format for notifying the other 	As above	Each clause is covered in the draft RAIO. However, this does not imply that each clause is necessarily

party about the proposed change.

- The process and format for the other party to accept the proposed change, including applicable timeframes and conditions of acceptance.
- Conditions under which the proposed change may be refused.
- A description of each party's responsibilities for service testing, fulfilment and operation once the change has been agreed.
- A description of the procedures and penalties associated with early termination of a new service or facility.

fit for purpose or reflects best practice.

URCA's comments on individual clauses are set out in the preceding Sections of this consultation document.

Source: URCA analysis

Annexe 2: Table of Consultation Questions

Consultation Question 1:

Do you agree that BTC should be required to provide a clearer separation between its draft interconnection contract and the draft reference access and interconnection offer? Please detail your response in full.

Consultation Question 2:

Do you agree that the BTC should remove any obligations on other operators which are inappropriate and unnecessary to manage the interconnection regime in The Bahamas? Please detail your response in full.

Consultation Question 3:

Do you agree that the BTC should fully justify any reciprocal clauses that remain in the RAIO? Please detail your response in full.

Consultation Question 4:

Do you agree that BTC should remove from its RAIO any reciprocal charging obligations on other operators? Please detail your response in full.

Consultation Question 5:

Do you agree that BTC should include in its RAIO the ability of OLOs in The Bahamas to terminate incoming international calls on BTC's network? Please detail your response in full.

Consultation Question 6:

Do you agree that the international call transit RAIO service should be made available to OLOs and that the charge should be based on:

- a cost based charge for call conveyance on BTC's network (including BTC's international facilities); and
- the relevant international settlement rate, passed on to OLOs at cost?

Please detail your response in full.

Consultation Question 7:

Do you agree that URCA should periodically review the relevant international settlement rates charged by BTC to OLOs for the international call transit RAIO service, to ensure that such charges are passed on to OLOs at cost?

Please detail your response in full.

Consultation Question 8:

Do you agree that BTC must:

- (i) add a RAIO call termination service for calls to freephone numbers on its network; and
- (ii) remove the RAIO charge for call origination from BTC's mobile network to freephone numbers on an OLOs network if BTC charges for such airtime?

Please detail your response in full.

Consultation Question 9:

Do you agree that BTC must include a service for terminating calls from OLOs to premium rate numbers in its RAIO? Please detail your response in full.

Consultation Question 10:

Do you agree that BTC should offer both direct accounting arrangements and cascading account arrangements for its call transit service? Please detail your response in full.

Consultation Question 11:

Do you agree that BTC should remove any call handover requirements from the RAIO and that BTC should amend the RAIO to the wording proposed by URCA? Please detail your response in full.

Consultation Question 12:

Do you agree that the following terms should be incorporated in BTC's RAIO:

- Joining Circuit, meaning the T1 capacity provided over a PoI;
- Joining Path, meaning the higher level transmission bearer; and
- Interconnect Traffic Route, meaning the group of 64kbit/s channels over which a given type of interconnect traffic is directed. A Traffic Route will usually be carried over two diverse Joining Paths for security and may even have an overflow via another PoI to cope with unusual traffic flows? Please detail your response in full.

Consultation Question 13:

Do you agree that further details need to be included in the RAIO on how decisions relating to the planning, construction and provision of the Joining Path are achieved and Annex G should reflect the appropriate charges of the chosen cost-recovery system? Please detail your response in full.

Consultation Question 14:

Do you agree that the current number of PoIs provided by BTC and its proposed approach to review interconnection requests at new PoIs are feasible? Please detail your response in full.

Consultation Question 15:

Do you agree with the following recommendations by URCA:

- (i) BTC should, in responding to this consultation document, provide an appropriate forecasting and capacity planning system, reflecting the scale of local operations.
- (ii) The agreed forecasting and capacity planning system should be reflected in BTC's RAIO which, before being concluded, must be reviewed and approved by URCA.

Please detail your response in full.

Consultation Question 16:

Do you agree that BTC should continue to offer free local calls given the non-zero RAIO charge for intra-island interconnection? Please detail your response in full.

Consultation Question 17:

Do you agree that BTC should be able to charge a cost oriented tariff in the RAIO for terminating calls to emergency services, and that each licensed operator should recover the costs of providing free emergency call services to their retail customers from their general revenues? Please detail your response in full.

Consultation Question 18:

Do you agree with URCA's requirement for BTC to submit retail proposals for calls to DQ and automated ancillary services given BTC's non-zero RAIO charges for equivalent wholesale inputs? Please detail your response in full.

Consultation Question 19:

Do you agree that mobile termination charges should not be included in the final RAIO except for incoming international calls to mobiles (delivered via an OLO)? Please detail your response in full.

Consultation Question 20:

Do you agree that it is appropriate for BTC to set a single rate in the RAIO across all times of the day / week i for its fixed voice products? Please detail your response in full.

Consultation Question 21:

Do you agree that BTC should publish charges for joining services for all available links in its RAIO? Please detail your response in full.

Consultation Question 22:

Do you agree that for its final RAIO, BTC should develop revised charges based on the amendments to its Accounting Separation model?

Please detail your response in full.

Consultation Question 23:

Do you agree with URCA's approach that where BTC has used the AS model for developing interconnection tariffs, these tariffs be used for 2010 and adjustments for efficiency be incorporated, in parallel with production of the AS model based on 2010 financials, from 2011 onwards? Please detail your response in full.

Consultation Question 24:

Do you agree with the URCA's proposal:

- (i) not to require BTC to change its draft RAIO charge for its calls to Directory Services for this year's RAIO; but
- (ii) to develop revised charges for this service, based on its AS unit cost results, in subsequent years.

Please detail your response in full.

Consultation Question 25:

Do you agree with the revised approach and resulting RAIO charges for BTC's Automated Ancillary charges (as set out in **Table 2**)? Please detail your response in full.

Consultation Question 26:

Do you agree with the revised approach and resulting RAIO charges for BTC's Automated Ancillary charges (as set out in Table 3)? Please detail your response in full.

Consultation Question 27:

Do you agree with URCA's proposition

- (i) not to require any changes to BTC's draft RAIO charges for its Operator Assistance service, but
- (ii) to require BTC to remove minimum call duration (of three minutes) from this service?

Please detail your response in full.

Consultation Question 28:

Do you agree that, in absence of further evidence on cost-reflectivity of its current charge, BTC should reduce the RAIO charge to \$1.91 per data entry? Please detail your response in full.

Consultation Question 29:

Do you agree that BTC should:

- (i) prepare, and publish, separate charges for its two PoI facilities in New Providence and Grand Bahama; and
- (ii) that these charges should contain location-specific accommodation cost estimates, which are reflective of the current utilisation of the relevant facilities (i.e., an average cost per square foot charge, weighted by the share of commercial and office space).?

Please detail your response in full.

Consultation Question 30:

Do you agree/disagree with URCA's identification of the issues and URCA's recommendations on the individual clauses in the draft RAIO?

Please detail your response in full, clause by clause.