OBLIGATIONS ON BAHAMAS TELECOMMUNICATIONS COMPANY LIMITED UNDER SECTION 116(3) OF THE COMMUNICATIONS ACT, 2009

Proposed Charging for Interconnection Joining Services

CONSULTATION DOCUMENT

ECS 07/2011

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1 Introduction

This consultation document outlines the Utilities Regulation and Competition Authority's (URCA) preliminary views on The Bahamas Telecommunications Company Limited's (BTC) revised charging proposals for interconnection joining services. Given the changes in the charges originally proposed by BTC (in its response to URCA's consultation on its draft Reference Access and Interconnection Offer (RAIO)[1]), URCA considers it appropriate to invite comments from other interested parties on BTC's proposals prior to finalising this aspect of the RAIO. This will ensure the charging regime – and the process by which the charges are derived – is transparent, while also affording other licensed operators (including interconnection seekers) who may have direct experience or knowledge of some of the costs associated with joining services an opportunity to comment on the reasonableness of BTC's proposed charges.

This consultation document therefore reviews and seeks comments on the main joining service charges contained in BTC's draft final RAIO submitted to URCA on 23 February 2011, and considers the reasonableness of the charges as well as the extent to which they are consistent with the overall principle of cost orientation, as well as the specific guidance set out in URCA's final decision (ECS 01/11 issued on 11 January 2011). Where appropriate, URCA sets out its proposed amendments to the draft charges put forward by BTC in its draft final RAIO.

URCA has issued this consultation document under, inter alia, the terms of s.11(1), s.13(1) and s.116 of the Communications Act, 2009 ("the Comms Act").

1.1 How to respond to this consultation

URCA invites and welcomes comments and submissions from members of the public, licensees and other interested parties on this consultation document.

Responses to this consultation document should be submitted to URCA by 5:00 p.m. on 4 May 2011. Persons may send their written responses or comments to the Director of Policy and Regulation, either:

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[1] "Response to URCA's Consultation Document ECS 22/2010 on BTC's Draft Reference Access and Interconnection Offer" dated 23 October 2010. at www.urcabahamas.bs.

- by hand, to URCA's office at UBS Annex Building, East Bay Street, Nassau; or
- by mail to P.O. Box N-4860, Nassau, Bahamas; or
- by fax, to (242) 393 0153; or
- by email, to info@urcabahamas.bs.

URCA reserves the right to make all responses available to the public by posting responses online on its website at www.urcabahamas.bs. If a response is marked confidential, reasons should be given to facilitate evaluation by URCA of the request for confidentiality. URCA may publish or refrain from publishing any document or submission, at its sole discretion.

1.2 Next Steps

URCA will review the responses received on or before 4 May 2011 and 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 changes to the proposed charges. URCA's final decision may require BTC to amend the proposed charges for interconnection joining services in BTC's RAIO as a perquisite to final approval by URCA.

2 Background to the Consultation

On 11 January 2011 URCA issued its Final Decision on the draft RAIO published by BTC.[2] In the Final Decision, URCA rejected BTC's proposed charging for joining services. This is because, along with a lack of supporting information to demonstrate the cost orientation of the proposed charges, the proposed charges did not reflect the position set out in URCA's consultation on the draft RAIO (ECS 22/2010). The Final Decision also set out the principles upon which BTC's charges for joining paths and joining circuits should be determined. This stated that:

> *"Joining Paths should be mutually planned and constructed, with each party paying for the whole or part which it constructs. Therefore, all the charges set out in Table 1 related to Joining Paths* [the draft charges BTC had previously provided to URCA] *should be set to zero and not included in the RAIO.*
>
> *Joining Circuit charges should apply in relation to the use of Joining Circuit capacity for an operator's 'owned' traffic provided on the (Joining Path) facilities owned and constructed by the other party. If the same Joining Circuit is used to carry traffic originating from both parties' networks (i.e., a bidirectional circuit), the cost of the Joining Circuit should be shared between the parties. These T1 Joining Circuit charges should include the T1 terminating card as well as the cost of the T1 port on the exchange it is connected to."*[3]

The Final Decision therefore required BTC to submit to URCA revised proposals for charging for joining circuits. Following a request for clarification from BTC, URCA subsequently confirmed that as part of the charges, BTC could partly recover the cost of ducting associated with joining paths through a mark-up on the joining circuit charge.[4]

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2 "Obligations on Bahamas Telecommunications Company Ltd. Under s.116(3) of the Communications Act, 2009: Draft Reference Access and Interconnection Offer (RAIO) Response to Public Consultation and Final Decision" ECS01/2011, issued 11 January 2011.

3 URCA's final decision on consultation question 21, ECS 01/2011, January 2011. The Final Decision also clarified the definition of joining paths and joining circuits; stating that references to the joining path meant the higher level transmission bearer over which the joining service is carried, with a joining circuit referring to the T1 capacity provided over a point of interconnect.

4 Letter from URCA to BTC, 3 February 2011

2.1 BTC's Proposed Joining Service Charges

BTC's draft final RAIO submitted to URCA on 23 February 2011 included a revised set of joining circuit charges. By letter to BTC on 8 March 2011, URCA sought a number of clarifications from BTC on the proposed charges, to which BTC responded on 15 March. As part of BTC's response to URCA, it also provided an update to some charges, reflecting what it considered to be errors in its initial calculations.

Table 1 below, presents BTC's proposed charges.

Table 1. BTC's tariff schedule - joining circuits

	One-off (BS$)	Monthly recurring (BS$)
Intra-island joining circuit segments		
Distance dependent charge per mile for duct		1,620
OC3 per unit	3,003	506
DS3 per unit	2,402	237
Footway box (per box)	3,951	38
Inter-island joining circuit segments		
Submarine tariff / T1 link		1,370
Testing charges (Per man hour)		
Service testing charge		23.47

Source: BTC letter to URCA dated 15 March 2011

Alongside its proposed charges, BTC submitted to URCA a spreadsheet detailing some of the calculations used to derive the proposed charges.

Below URCA reviews the main charge elements proposed by BTC and, where appropriate, sets out preliminary revisions to the charges to ensure they reflect the overall principle of cost orientation, as well as the specific guidance set out in URCA's final decision on BTC's RAIO.

In general, URCA's review finds that in a number of areas BTC has failed to provide adequate justification for its proposed charges, particularly in respect of the cost mark-ups it has applied for network maintenance/support and recovering common costs. Further, for some elements of its charges, URCA believes BTC has incorrectly interpreted the guidance set out in Section 3.5 (page 38) of URCA's Final Decision on BTC's draft RAIO.

2.2 Charging for Duct and Inter-island Joining Segments

BTC has calculated intra-island duct costs using internal engineering data which it states it uses to calculate the capital expenditure required for development works. BTC has not, however, provided any evidence to support this statement and thus it is difficult for URCA to judge the extent to which this charge is cost oriented. Furthermore, many of the costs of deploying duct are peculiar to the local environment concerned. It is therefore not possible for URCA to robustly benchmark the charges proposed by BTC against those applied in other jurisdictions. URCA has, however, been able to review the calculations made by BTC to derive its proposed charges.

BTC has based the charge for the inter-island segment of the joining service on 2005 cost information. This information includes both the passive infrastructure and the terminal station. To determine the final unit cost, BTC then also:

- subtracts a supplier discount from the basic costs;
- adds customs duty of 45% to the costs of the terminal station, submersible plant and cable plant (the latter two both being part of the passive infrastructure costs);
- adds a 20% mark-up for network operations, maintenance and support; and
- adds a 15% mark-up to cover a share of common and joint costs.

URCA believes BTC is correct to deduct from its costs the supplier discount it has received, or which it typically receives. As such, URCA therefore proposes to accept this element of BTC's calculation.

URCA has noted it is common for imported equipment to incur customs duty and including these duties in the charges is therefore reasonable. URCA has confirmed with the relevant Bahamian authorities that BTC's use of a 45% customs duty accurately reflects the current level of customs duties on electronic communications equipment entering The Bahamas. It therefore seems appropriate to include this element in the charge base.

It is also reasonable for the joining circuit charges to include an allowance for the indirect operating costs associated with maintaining and supporting the circuits, and for these circuits to contribute to the recovery of BTC's common and joint costs. Again, BTC has not provided detailed justification for mark-ups it has included for covering these costs in the proposed charges. Rather, it only refers to confidential

models developed elsewhere and one part of BT's (the UK incumbent operator) separated accounts, which shows the operating costs for interconnection circuits.[5]

BTC's own separated accounts are prepared on a fully allocated cost basis, meaning it is not possible to use these accounting statements to explicitly identify common costs. This means it is not possible for URCA to compare the level of common costs identified by BTC in its separated accounts with the mark-up BTC has proposed to include in the joining circuit charge.

Bottom-up models of operator businesses will often estimate operating costs, including common costs, using a mark-up over capital costs, rather than showing separate mark-ups for network maintenance/support and common costs. In these cases, from experience elsewhere, URCA understands that a typical assumption made in a bottom-up model is that annual operating (and common) costs are equivalent to 10% of the gross replacement cost (GRC) of the asset base for the business. At first sight, this is significantly below the total 35% mark-up applied by BTC. However, it is important to note that the BTC mark-up is applied to the annualized capital costs of equipment, rather than to its GRC. It is therefore important to compare these two estimates on a like-for-like basis. **Table 2** below provides this comparison by showing an estimate of total monthly operating costs calculated as 10% of GRC (divided by 12 to give a monthly figure) and the total monthly operating (and common) cost mark-up included by BTC in its proposed charges.

[5] Section 6 of BT's current cost financial statements for 2009.

Table 2. Comparison of operating cost assumptions

	Monthly operating costs – BTC assumptions (BS$)	Monthly operating cost calculated as annual cost equal to 10% of GRC (BS$)
Distant dependent charge per mile for duct	446	980
OC3 per unit	131	228
DS3 per unit	62	107
Footway Box per unit	10	24
Submarine tariff / T1 link (for 2 T1 ports)	355	729

This shows that in all cases, the monthly operating costs assumed by BTC in its derivation of the charges are below those which would result if all operating costs were assumed to be equivalent to 10% of the network GRC. Although it is possible that the maintenance and support costs for joining links are lower than those for other network components/services, the gap between the two estimates suggests that it could be reasonable to provisionally accept BTC's proposed charges.

URCA further notes that the proposed inter-island charge is calculated as the cost for two T1 ports. Although BTC has not provided an explanation for this, it appears to URCA that this has been calculated to cover the cost of the T1 port at each end of the submarine link.

2.3 Proposed Charging for OC3 and DS3 units

URCA's Final Decision was that the joining circuit charge should cover the cost of the terminating card in the transmission terminating equipment and the cost of the T1 port in the exchange. URCA also concluded that the joining circuit charge should not cover the cost of the transmission terminating equipment itself. Rather, as set out in Figure 1 on page 25 of URCA's Final Decision on BTC's draft RAIO (and reproduced below, for ease of reference), this forms part of the joining path. However, URCA considers it would be reasonable for charges for each T1 to reflect a proportion of the cost of the terminating equipment.

Figure 1. Joining circuit definitions

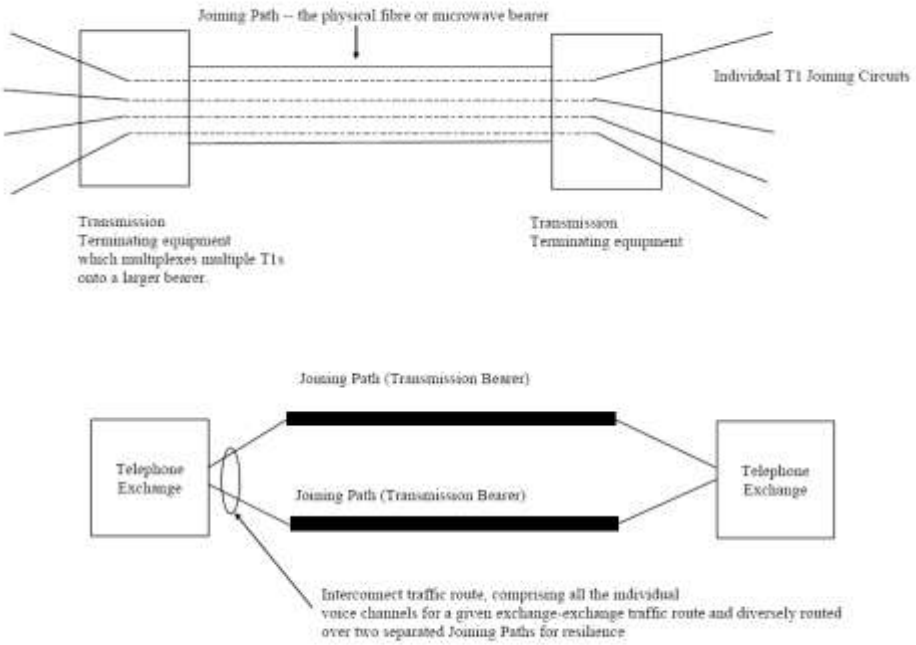

Figure 1, URCA's Final Decision on BTC's draft RAIO (ECS 01/2011)

This is not reflected in BTC's proposed charges, which recover all the costs of the OC3/DS3 unit from the interconnection seeker, regardless of the number of T1s taken. In effect, BTC's charge means that only the OLO (i.e., the interconnection seeker) would bear the cost of underutilised plant. This is not in line with best practice elsewhere. For example, in the UK, the minimum joining path size is an STM1, even though it is then sold in units of 2Mbit/s. The STM1 (155Mbit/s) is not charged, but the 2Mbit price reflects a proportion of the bearer costs.[6]

BTC's approach is also not consistent with URCA's Final Decision requiring each party to pay for the whole or part of the joining path that it constructs. Therefore, although URCA's approach means that BTC must bear the cost of underutilisation of the bearer at its end of the joining path, the OLO faces similar costs at its end of the joining path. This does not, therefore, place BTC at a disadvantage.

[6] It is standard for interconnection to be provided with a minimum Joining Path size, reflecting the fact that single fibre has a large capacity.

To reflect this cost construction requirement, URCA believes that the OC3/DS3 charge per unit that BTC quotes in its revised tariff schedule should be divided by the capacity of each unit in terms of equivalent T1s, in order to derive a charge per T1. For the avoidance of doubt, BTC's cost estimate must include the cost of the terminating card and the T1 port in the exchange. If it does not, these cost items should be added to the joining circuit tariff (and also expressed as a charge per T1).

URCA believes these cost principles should apply to both the installation and monthly rental charges quoted by BTC for the OC3 and DS3 unit. That is, unless BTC faces an installation cost for the T1 card then URCA considers the proposed one-off charges for the OC3 and DS3 unit should be set to zero, with these costs recovered in the same manner as the equipment costs.

3 URCA's Preliminary Views

3.1 Charging for Duct and Inter-island Joining Segments

BTC has not provided URCA with detailed justification or evidence to support its proposed charges, rather referring to internal studies and other information. Nevertheless, URCA has been able to replicate BTC's calculations used to derive the proposed charges. Therefore, given the lack of suitable benchmarks which could be used to determine an alternative set of charges (and which would be more appropriate than those proposed by BTC), URCA considers that it is reasonable for URCA to accept, for BTC's initial RAIO, the charges proposed by BTC, subject to BTC confirming URCA's understanding of whether the per T1 charge for inter-island links is based on the cost of two T1 equivalents, is correct.

3.2 Charging for OC3 and DS3 units

The charges for OC3 and DS3 units should be removed from BTC's draft tariff schedule and replaced with a charge per T1. This charge should cover the cost of the T1 terminating card in the transmission terminating equipment and the cost of the T1 port in the exchange, together with a proportionate amount for the cost of the unit. These charges can be derived from the information provided by BTC to URCA and are set out in Table 3 below of revised joining circuit charges.

Table 3. Proposed revised tariff schedule - joining circuits

	One-off (BS$)	Monthly recurring (BS$)
Intra-island joining circuit segments		
Distance dependent charge per mile for duct		1,620
OC3 per unit (per T1 circuit)		6.70
DS3 per unit (per T1 circuit)		10.10
Footway box (per box)	3,951	38
Inter-island joining circuit segments		
Submarine tariff / T1 link		1370
Testing charges (Per man hour)		
Service testing charge		23.47

Source: URCA calculations

It is not clear to URCA if the costs included by BTC in its derivation of the charges include the cost of the T1 terminating card in the transmission terminating

equipment and the T1 port in the exchange. If these costs are not included, they should be added by BTC to the cost base used to derive the charges per T1 circuit.

URCA has applied the same principles to BTC's monthly recurring charges and installation charges. BTC's charges for installation should only include any one-off costs associated with installing the T1 card, or connecting the port in the exchange. Other installation costs associated with the transmission terminating unit itself should be recovered by BTC as a mark-up over all T1s. URCA has therefore included these in the costs used to calculate the monthly annuity payment.

URCA now invites comments from all parties on the proposed charge levels. Where a stakeholder believes that the charges set out in **Table 3** above should be amended further to ensure compliance with the principles laid out in URCA's Final Decision, it should set out clearly its reasoning, together with evidence to clearly support its proposed amendments.