PRELIMINARY DETERMINATION

TYPES OF OBLIGATIONS ON BAHAMAS TELECOMMUNICATIONS COMPANY LTD. UNDER S. 116(3) OF COMMUNICATIONS ACT, 2009

CONSULTATION DOCUMENT

ECS 18/2009

Issue Date – 30 September 2009
Response Date – 16 November 2009

UTILITIES REGULATION & COMPETITION AUTHORITY

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1 Introduction

This document is issued under the terms of s. 116 of the Communications Act, 2009 ("Comms Act"), and contains a Preliminary Determination and a Draft Order, addressed to Bahamas Telecommunications Company Ltd. ("BTC")[1]. This is a public consultation and BTC and third parties are welcome to respond to this document.

The rest of the introduction provides:

- an overview of the regulatory framework and the transition framework (Section 1.1 and 1.2);
- a basic explanation of what is the Preliminary Determination and Draft Order (Section 1.3);
- a description of the choice of procedure that URCA has adopted (Section 1.4)
- an explanation of how to respond to this consultation (Section 1.5); and
- an overview of the structure of the remainder of this document (Section 1.6)

1.1 Regulatory Framework

The Comms Act introduces a new regime for the regulation of networks and services in the electronic communications sector in The Bahamas. It provides guidelines to be followed for regulation and Government measures in s. 4 and s. 5 of the Comms Act.

The Comms Act gives powers to a new regulator, set up under the Utilities Regulation and Competition Authority Act, 2009 ("URCA Act"). The Utilities Regulation and Competition Authority, URCA, has wide-ranging powers, to be exercised in full compliance with principles of good regulation.

URCA is required to introduce regulatory measures which are efficient and proportionate to their purpose and to introduce them in a manner that is transparent, fair and non-discriminatory. This means that where URCA believes that market forces alone are unlikely to achieve the policy objective within the required timeframe, it may introduce regulatory requirements, having due regard to the costs and implications for affected parties[2].

As a general principle, market forces should be relied upon as much as possible and regulatory measures should be introduced by URCA only when necessary.

1.2 The Transition Framework

The Comms Act provides a *transition framework* for the orderly move from the current regulatory regime which prescribes different systems of regulation for telecommunications operators, on the one hand, and cable companies and broadcasters, on the other, to a system of unified regulation under the supervision of URCA.

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[1] Under the terms of the Comms Act, s.116(2), URCA must consider what obligations are to be imposed on operators presumed to have Significant Market Power (SMP). In accordance with Schedule 4 of the Comms Act, the presumed SMP operators include "any affiliates". This is explained further under Methodology in Section 4 below.

[2] As set out in the Comms Act, s.5(b)(i), 5(b)(ii) and 5(c).

Consistent with s. 4(a) of the Comms Act, the transition framework is designed to ensure that the interests of consumers in The Bahamas are furthered by promoting sustainable competition, an objective that would be hindered if existing operators with Significant Market Power ("SMP") were allowed to operate in the absence of regulation immediately on the Comms Act coming into force. The introduction of competition allows for choice of different electronic communications services providers, to the benefit of all persons in The Bahamas.

Further, the transition regime is consistent with the overall guiding principles in s. 4 and s. 5 of the Comms Act, namely that obligations should only be imposed where there is a need for them and should be efficient and proportionate to their purpose and introduced in a manner that is transparent, fair and non-discriminatory.

As per s. 116, Cable Bahamas Ltd. ("CBL") and BTC are each presumed to have SMP in two high level markets. These interim presumptions are the basis for the imposition of obligations under s. 116(2) of the Comms Act, which should be designed to achieve the objective of encouraging, promoting and enforcing sustainable competition.

Consistent with this framework, URCA should consider the products included in the high level SMP markets in order to identify those products that require the imposition of obligations. URCA should then identify obligations to be imposed on the SMP operators in relation to those products. URCA believes that the methodology (the "Methodology") described in Section 4 below, achieves this.

It should be noted that SMP is defined as the ability of an entity to act independently of its competitors and customers[3]. Thus SMP may exist in markets where more than one provider currently offers competing services to customers.

Due to the presumed SMP, CBL and BTC are not permitted to engage in the provision of networks and of carriage services which they were not already licensed to provide at the time that the Comms Act came into force, until such time as they have been confirmed compliant with the obligations imposed on them (s. 116(5)). This is consistent with a need to ensure that the transition to the new regime happens in an orderly manner and that existing operators do not have an ability to foreclose markets to prevent new market entry.

1.3 What is in the Preliminary Determination and Draft Order

The Preliminary Determination and Draft Order, together with the supporting information provided by URCA in this document, detail to BTC the obligations which must be adhered to within stated timeframes.

BTC is not permitted to engage in the provision of networks or of carriage services which it was not already licensed to provide at the time that the Comms Act came into force, until it is confirmed compliant with the following obligations:

- Accounting separation and cost accounting,
- Retail price regulation, and
- Reference access and interconnection offers.

[3] Or for a group of entities to do this collectively.

The obligations are outlined in full in the Draft Order attached to this document and should be read in conjunction with guidelines published by URCA. The obligations proposed by URCA are designed to maintain the objective of encouraging, promoting and enforcing sustainable competition in accordance with s. 116(2). In addition, BTC must adhere to standard SMP obligations contained in the Individual Operating Licence issued by URCA (ECS 10/2009).

1.4 Choice of Procedure

The timetable for the imposition of the obligations and the move towards the new regime is stringent on the regulator. According to s.116(3):

- URCA has **one month** from the coming into force of the Comms Act to communicate in writing to the SMP operators the "types of obligations" that in URCA's view would be required to satisfy the requirements in s.116;

- The relevant or existing licensee submits proposed obligations to satisfy the requirements; and

- URCA shall within 3 months make a final decision.

Whilst it is clear from s. 116 that consultation and engagement with the licensee is envisaged, the type of procedure to follow is not prescribed. URCA has carefully considered the possible options and has decided that the best procedure to be followed is that of issuing Determinations and Orders as set out in Part XVII of the Comms Act. This is because these procedures are designed to ensure clarity and transparency, and include a period of public consultation.

As explained in this document (and particularly in the Methodology under Section 4 below), URCA has throughout the process leading to the issue of this Preliminary Determination and Draft Order applied the principles in s. 5, namely to promote competition while recognising that market forces are to be relied upon as much as possible and that measures are only to be introduced when market forces are unlikely to achieve the objectives within a reasonable time frame, having due regard to the costs and other implications for affected parties.

In addition, in designing the obligations in the Draft Order, URCA applied the principles that the measures have to be efficient and proportionate to their purpose and introduced in a transparent, fair and non-discriminatory manner. URCA considers that the procedure for Preliminary Determinations and Draft Orders achieves these objectives.

The procedure for issuing a Determination as set out in s. 100 (and s. 95) of the Comms Act is outlined below:

Procedure for issuing a Determination (appending an Order)

1. URCA gives notice of a Preliminary Determination to the proposed addressee(s). This document constitutes the formal notice of a Preliminary Determination.
2. The Preliminary Determination specifies the obligations which are the subject of the Determination.
3. The Preliminary Determination is to enclose a copy of any Draft Order.
4. The addressee(s) of the Preliminary Determination and interested third parties have a period of no less than **one month** to make representations to URCA.
5. Within **one month** of the end of the consultation period, URCA can issue a Final Determination and a Final Order.

1.5 How to Respond

1.5.1 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 proposed questions below as a guide and with reference to the contents of this document, associated guidelines[4] and any other information the respondent wishes to provide.

In line with the procedure outlined in Section 1.4 above, but reflecting the size, nature and importance of this consultation, the timetable for this consultation is extended beyond the standard one month period for responses, and will be as follows:

- All submissions to this consultation should be submitted by 5pm on 16 November 2009.
- URCA shall endeavour to publish these responses by 5pm on 17 November 2009.
- Interested parties then have an opportunity to comment on submissions made by other respondents by 7 December 2009.
- The date of 7 December 2009 marks the end of consultation period.
- URCA then has one month from the end of this consultation period to make a Final Determination and Final Order which shall be issued by 6 January 2010.

Note that by choosing to adopt the determination procedure, URCA agrees to be bound by a shorter timetable than the timetable for issuing a Final Determination under s. 116.

Persons may obtain copies of the public consultation document either:

a. in printed booklet from URCA's office at Fourth Terrace, Collins Avenue, Nassau; or

b. by downloading it from the URCA Website at www.urcabahamas.bs.

Persons may send their written submissions or comments on the public consultation document to the Chief Executive Officer, URCA either:

[4] ECS 20/2009 Accounting Separation and Cost Accounting Guidelines issued to BTC, and ECS 22/2009 on Access and Interconnection Guidelines.

a. by hand, to URCA's office at Fourth Terrace, Collins Avenue, Nassau; or

b. by mail to P.O. Box N-4860; or

c. by fax, to 242 323 7288; or

d. by email, to info@urcabahamas.bs.

1.5.2 How to Structure Your Response to this Consultation

Please respond to points a) through d) below. Please provide full and detailed responses, including cross references to the obligation number in the Draft Order, Section numbers in the main document, supporting annexes, and guidelines. Clarity and detail will enable URCA to analyse responses with greater consideration.

a) Do you agree with:

   i the exclusion of products from the high level SMP market?

   ii the proposed obligation(s) imposed on specific products?

   iii the proposed compliance deadline for the implementation of the obligation(s)?

   iv the charging principles, where applicable, specified for the application of the obligations? Please refer to the relevant guidelines for further detail of the principles.

b) If you answered "No" to any of the above, please state the reasons with reference to the background materials provided, relevant guidelines or any other evidence which you consider to be relevant.

c) If you disagree with the obligation imposed on the specific product please submit alternative obligations which would satisfy the requirements as set out in Section 4.4.

d) Any other comments on the consultation and supporting guidelines.

1.6 Structure of the Remainder of this Document

The remainder of this document is structured as follows:

- Preliminary Determination; an overview of the objectives of the obligations to be imposed on BTC (Section 2);

- Draft Order; the types of obligations URCA proposes to impose on BTC (Section 3);

- Methodology; description of the general methodology followed by URCA in determining the types of obligations to be imposed on BTC (Section 4); and

- Appendices; background information for the Preliminary Determination and Draft Order for the fixed voice and data market and mobile voice and mobile data market (Section 5).

2 Preliminary Determination

This is a Preliminary Determination issued under the terms of s. 100 of the Comms Act.

In accordance with s. 116(3) of the Comms Act URCA has **one month from entry into force of the Comms Act** to indicate in writing to SMP licensees listed in Schedule 4 the types of obligations that, in URCA's view, are designed to maintain the objective of encouraging, promoting and enforcing sustainable competition in accordance with s. 116(2).

Schedule 4 of the Comms Act imposes presumptions of SMP on BTC in the provision of the following services:

- fixed voice services[5]; and
- mobile voice and mobile data services.

Accordingly, this document constitutes the formal notice of a Preliminary Determination to BTC that in URCA's preliminary view, the following types of obligations apply in the following defined high level markets:

Fixed voice and data services:

- *Accounting separation* and cost accounting across all products – further guidance is provided in ECS 20/2009 Guidelines for Accounting Separation and Cost Accounting.
- *Retail price regulation* for fixed telephony access and local calling, domestic long distance fixed calling and domestic calls to rated numbers, international long distance fixed calling and broadband internet access[6].
- *Reference access and interconnection offer* for call transit (domestic and international), call termination services (domestic and international), wholesale national and international backhaul services, wholesale directory enquiries and ancillary services and bitstream access – further guidance is provided in ECS 22/2009 Guidelines for Access and Interconnection.

Mobile voice and mobile data services:

- *Accounting separation* and cost accounting across all products.
- *Retail price regulation* for mobile access, local mobile calling, domestic long distance mobile calling, international long distance mobile calling and mobile data.

[5] The draft Sector Policy (page 12, footnote 3) states that the market for fixed voice *"…is intended to include the full product set delivered over BTC's fixed network including both voice and data services."*

[6] For broadband internet access, this obligation applies only to areas which are not covered by CBL's network.

The types of obligations set out above have been designed after careful review of the presumed SMP operators' products in each high level market, as more particularly explained in the appendices to this document and in accordance with the Methodology set out in Section 4. Further details of the full set of obligations can be found in the Draft Order at Section 3 of this document.

URCA is mindful that the interim SMP presumptions are intended to create a transition framework and that comprehensive market reviews will be conducted in the following years. URCA considers that the time horizon for the types of obligations that should apply during the interim period should be about 12-24 months[7].

Accordingly, URCA believes this Preliminary Determination and Draft Order to be proportionate in its approach. Whilst the end result may be that BTC may be regulated more lightly than would otherwise have been the case, URCA takes the view that light-touch regulation would allow it to observe the behaviour of BTC during this initial period. BTC's behaviour will be an important determinant of future decisions by URCA as to whether heavier regulation may be required.

URCA will issue a Final Determination and Final Order after careful consideration of all comments received in response to the consultation.

2.1.1 Summary of retail and wholesale products not subject to SMP obligations at this time

The presumption that BTC has SMP does not imply that URCA will necessarily impose wide-ranging regulatory obligations on BTC. On the contrary, in accordance with s. 4 and s. 5 of the Comms Act, URCA has considered in all cases the extent to which market forces can be relied upon as the means to achieving the electronic communications policy objectives.

Following the Methodology in Section 4, URCA has concluded that the following products should be excluded from the high-level SMP market[8]:

Retail

- Voice over Internet (ViBe)
- Public Payphones

Wholesale

- Fixed call origination
- Broadband resale
- All forms of access to the local loop (unbundled local loop)
- Wholesale line rental
- Origination of calls to freephone numbers
- Access to the directory enquiries database
- Mobile wholesale regulation
- Direct mobile access and interconnection

[7] This is because the change to the new regime is a step change for The Bahamas and it is conceivable that future developments in the marketplace may require a medium term review or at least a review of some of the obligations being imposed now.

[8] If a product is excluded from the SMP market, then URCA will not impose a regulatory obligation in relation to that product. See Methodology below.

In addition, URCA's analysis leads to the result that national and international leased lines, although not excluded from the SMP high level market, shall not at this time be subject to specific retail or wholesale regulation.

3 Draft Order

This Section outlines in more detail the standard and specific obligations to be imposed on BTC for a limited number of BTC's products. The products and obligations have been chosen in accordance with the Methodology set out in Section 4. Further information on URCA's analysis and conclusions can be found in the appendices to this document.

3.1 Standard obligations to be imposed on BTC

The obligations listed below, as specified in the standard Individual Operating Licences published by URCA on 1 September 2009, are not discretionary and they will be applied for all products found to comprise the high-level SMP markets.

- For all retail and wholesale SMP products
    - Non-discrimination
- For all retail SMP products
    - Requirement to publish charges and terms and conditions
    - Consumer protection

3.2 Specific obligations to be imposed on BTC

The specific obligations to be adhered to by BTC are as follows:

Table of specific obligations

#	Retail/ Wholesale	Product	Retail/Wholesale Obligations to be applied	Deadlines	Charging principle
1	Retail	Fixed telephony access and local calling	Retail price regulation*	Immediate	
2	Retail	Domestic Long Distance (DLD) fixed calling and domestic fixed calls to rated numbers	Retail price regulation*	Immediate	
3	Retail	International Long Distance (ILD) fixed calling	Retail price regulation*	Immediate	
4	Retail	Broadband Internet access in specified areas[9]	Retail price regulation*	Immediate	
5	Retail	National Leased Lines	No regulation	None	
6	Retail	International Leased Lines	No regulation	None	
7	Retail	Mobile access	Retail price regulation*	Immediate	
8	Retail	Local mobile calling	Retail price regulation*	Immediate	
9	Retail	Domestic Long Distance (DLD)	Retail price regulation*	Immediate	

[9] Areas which are not covered by CBL's network.

		mobile calling			
10	Retail	International Long Distance (ILD) mobile calling	Retail price regulation*	Immediate	
11	Retail	Incoming international calls to mobile customers	Compliance with retail price regulation Removal of charges to customers	Immediate 2 months	
12	Retail	Mobile data	Retail price regulation*	Immediate	
The wholesale section only refers to the fixed voice* and data market**					
13	Wholesale	Call transit (domestic and international and mobile)	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
14	Wholesale	Call termination services****(domestic and international)	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
15	Wholesale	Wholesale national backhaul	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
16	Wholesale	Wholesale international backhaul	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
17	Wholesale	National leased lines	No regulation		
18	Wholesale	International Leased Lines	No regulation		
19	Wholesale	Wholesale directory enquiry and ancillary services (call termination and service provision)	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
20	Wholesale	Bitstream service	Include in published reference offer**	2 months from final determination by URCA	Cost oriented

* BTC shall comply with URCA's specific requirements for the retail prices for these products and for related products as URCA may require from time to time. URCA's requirements for retail pricing are set out below.

** BTC shall produce a reference offer for interconnection and access to its network for the products specified above and any additional enabling products that a wholesale customer may reasonably require in order to make use of the products listed. Such enabling products include joining circuits, points of interconnection and data management amendments. URCA's requirements for the reference access and interconnection offer are set out in the Access and Interconnection guidelines. Definitions of the enabling components to be included are set out below.

***Including transit and termination to mobile network.

**** This includes call termination, termination of emergency calls to the police, termination of automated ancillary services, termination of calls to freephone numbers, termination of calls to operator assistance facilities and termination of calls to directory enquiries.

Under s. 116(2), Operators listed in Schedule 4 (including their affiliates) will be subject to obligations designed to maintain the objective of encouraging, promoting and enforcing sustainable competition. In accordance with s. 116(3)(a), URCA sets out in this draft Order:

- the types of obligations that in URCA's view would satisfy the requirements in s. 116(2); and
- the timeline by which Operators must submit draft obligations under s. 116(3).

If an Operator fails to submit proposed obligations in accordance with the timeline in the Final Order, URCA may impose a fine on that Operator under s. 109.

Compliance is achieved once URCA confirms that the SMP Operator has complied with each of the Obligation imposed upon that Operator (and its affiliates) in accordance with s.116(4) and (5).

Accounting Separation and Cost Accounting

In addition to the specific obligations in the table above, BTC is also obliged to implement accounting separation and cost accounting.

The minimum set of retail services for which separate accounts should be prepared has to include:

Fixed Network Retail Services:

- Fixed telephony access
- Local calling - fixed to fixed
- Fixed to mobile calling
- Domestic Long Distance (DLD) fixed calling and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling
- Broadband Internet access
- National Leased Lines
- International Leased Lines
- Remainder of fixed network services (not captured in the above categories)

Mobile Network Retail Services:

- Mobile access
- Local mobile calling
- Domestic Long Distance (DLD) mobile calling
- International Long Distance (ILD) mobile calling
- Mobile data
- Remainder of mobile retail services (not captured in the above categories)

The following list shows a minimum set of wholesale services for which separated accounts need to be reported:

Fixed Network Wholesale Services:

- Call transit
    - domestic
    - international
- Call termination services[10]
    - domestic
    - international
- Remainder of wholesale voice services (all voice services not captured in transit or termination services above)
- Wholesale national backhaul
- Wholesale international backhaul
- National leased lines
- International Leased Lines
- Remainder of wholesale transmission services (services not captured in backhaul or leased line reports above)
- Wholesale directory enquiry and ancillary services (call termination and service provision)
- Bitstream service
- Local Access Loops
- Remainder of wholesale access services

Mobile Network Wholesale Services:

- Mobile voice call termination
- Mobile voice call origination
- Mobile on-net voice calls
- Remainder of mobile voice services (e.g. voicemail calls, customer service calls, bill inquiries, etc)
- SMS termination
- Remainder of mobile messaging and data services

For the initial reporting under these guidelines, BTC must submit separated accounts for 2008 within three months of the publication of the Final Determination. These accounts may be unaudited and unpublished to allow BTC to establish a "test" year.

[10] This includes call termination, termination of emergency calls to the police, termination of automated ancillary services, termination of calls to freephone numbers, termination of calls to operator assistance facilities and termination of calls to directory enquiries.

For 2009 and each subsequent year, BTC must submit audited separated accounts within six months of the end of their financial year.

The accounting separation and cost accounting guidelines as specified in ECS 20/2009 must be used when fulfilling any obligations that have a requirement for the development of cost-oriented rates.

3.2.1 Access and Interconnection Enablers

3.2.1.1 Component definitions

The components below represent those which, in addition to the wholesale products included in the high level SMP market, must be made available in the reference access and interconnection offer mandated in this Order.

3.2.1.2 Joining Circuits

Joining circuits are where BTC provides interconnection capacity to other operators to enable the provision of dedicated connectivity between the other operator's network boundary and the BTC Point of Interconnection ("POI"). Joining circuits can be provided as point to point or point to multi-point.

1. Point to Point - from a single POI on BTC's network to a single POI at the other operator's location.

2. Point to Multi Point - from a single POI on BTC's network to a number of POIs at the other operator's location (based on wireless).

3.2.1.3 Points of Interconnection

POIs may be provided using either:

1. Customer Sited Interconnection ("CSI") - a point of interconnection provided by BTC at the other operator's location.

2. In-span Interconnection ("ISI") - a point of interconnection provided at a point between BTC and the other operator's location.

3. Co-location - a point of interconnection provided at BTC's location.

3.2.1.4 Data Management Amendments (DMA)

Data reconfiguration of either or both operators' system as is necessary for the access, routing and charging of calls on and between the operators' systems (e.g. for setting up new number groups, new Points of Interconnection, etc.).

3.2.2 Cost of Capital

The cost of capital, as determined by URCA, must be used when fulfilling any obligations that have a requirement for the development of cost-oriented rates.

3.2.3 **Retail Price Regulation**

BTC is deemed to be immediately compliant with the Retail Price Regulation obligations, and shall act in accordance with the framework set out below in order to remain so.

The detailed framework and obligations are specified in the following sections.

3.2.3.1 **Filing of Initial Tariffs/Prices**

Within 30 days of URCA issuing the SMP operator with the Final Determination and Final Order of its obligations[11], the operator shall file with URCA its existing tariffs/prices of each retail product and service subject to retail price regulation (see the table of specific obligations above, henceforth these services are referred to as "Price Regulated Services") and the terms and conditions upon which those services are provided. Where the product or service is offered as part of a bundle with other products or services, or is tied to other products or services, the bundled/tied prices should be provided as well.

The SMP operator shall at the same time file with URCA the volume of sales (number of subscribers, traffic volumes) and revenues relating to each Price Regulated Service for the previous two financial years, or such period as the service has been provided for if less than two years.

3.2.3.2 **Investigations**

In exercise of its powers to conduct inquiries or investigations under s. 8(1)(j) of the Comms Act, URCA reserves the right to conduct an investigation into an SMP operator's prices and terms and conditions for a Price Regulated Service on its own motion, without receiving a complaint from another party.

Under the terms of s. 9 of the Comms Act, URCA may request that the SMP operator provide information to URCA during any such investigation. URCA shall state the purpose of the request, specify the information required and specify the time period within which the information is to be provided. Failure to provide timely and accurate information may lead to the imposition of a fine.

3.2.3.3 **Tariff/Price Changes**

The following terms shall apply to both price increases and decreases.

The SMP operator shall not change the tariff/price of any Price Regulated Service without the prior written approval of URCA.

The SMP operator shall submit to URCA an application for a tariff or price change, as appropriate, at least 30 days before the proposed effective date of the change.

Such application shall include:

- A description of the product or service for which the price change is being requested;
- Proposed effective date for the price change;
- Current tariffs/prices;

[11] If these are issued separately, the 30 day period applies from the date of the later issue.

- Proposed tariffs/prices;

- Any proposed changes to the applicable terms and conditions that will result from the price change;

- Commercial rationale for making the proposed change;

- Pricing principle applied in developing the proposed price (cost-oriented, market pricing, etc.);

- Data relevant to the proposed change, including the following:

    - Volume of demand;

        - Number of existing subscribers or users that would be affected by the proposed tariff change;

        - Size of overall market/market share of the SMP operator;

    - Relevant revenues for the service;

    - Pricing of communications inputs to the service;

    - Volume of communications service inputs;

    - Costs of communications inputs for the service;

    - Direct costs of the service including capital costs and operating expenditures (e.g. network components and marketing costs);

    - Estimate of the incremental indirect costs of the service;

    - Total cost of the service; and

    - Estimates of the incremental Profit and Loss and Cash Flow resulting from the service; and

- The effect of the proposed tariff change on the SMP operator's regulated rate of return.

Where possible, this data should be provided in accordance with the Accounting Separation and Cost Accounting Guidelines issued by URCA (ECS 20/2009). URCA reserves the right to request additional information from the SMP operator relating to the proposed tariff change.

In the absence of costing information in accordance with the Accounting Separation and Cost Accounting Guidelines, the SMP operator may provide URCA with other information to support its proposed price change including:

- Benchmark study of prices in comparable jurisdictions along with supporting information;

- Verifiable financial management information in respect of providing the service.

The SMP operator must submit a declaration signed by an authorised officer confirming that the proposed price decrease is not anticompetitive and, in particular, that the proposed price decrease:

a. does not result in predatory pricing[12];

b. does not entail an unfair cross-subsidy[13]; and

c. will not result in a margin squeeze[14] on other operators.

To the extent possible, this declaration should be supported with evidence, which should also be provided to URCA.

The SMP operator must submit a declaration signed by an authorised officer confirming that its application is in accordance with this Order, the Comms Act, its operating licence, the Sector Policy and any other relevant documents.

Based on the information provided to it, URCA may state that it has no objections to the proposed tariff/price changes or may block or propose suitable amendments to any tariff/price change for a Price Regulated Service.

URCA shall review an application for a tariff/price change as follows:

a. Within 30 days of receipt of a completed application (all information is provided in accordance with the requirements of this section), URCA shall respond with one of the following:

   - A statement of no objection;

   - A rejection of the application with reasons;

   - A notice that the application will go to public consultation and that therefore a final decision is withheld for the time being. URCA will consider whether there would be a need for public consultation based on factors such as the expected impact of the price change, in terms of number of customers affected; possible alternative products available to customers; revenue impact on the operator and expected impact on competition in the market place.

b. If a notice that the application must go to public consultation is issued, as soon as practicable URCA will allow the public a minimum of 30 days to respond to the consultation, unless otherwise stated by URCA; and

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[12] This may occur when services are provided by the SMP operator at prices below cost so as to foreclose or be likely to foreclose actual or potential competitors. This can result in competitors being driven out of business, thereby increasing prices to uncompetitive levels in the long run.

[13] This may occur when an SMP operator allocates all or part of the costs of an activity in one geographical or product market to an activity in another geographical or product market.

[14] This may occur when a vertically integrated SMP operator in the upstream market charges a price for the product on the upstream market which, compared with the price it charges on the downstream market, would prevent an equally efficient competitor from trading profitably in that downstream market on a lasting basis.

c. Within 30 days of the close of the public consultation, URCA will publish a final decision.

3.2.3.4 **Special Offers or Discounts ("Special Promotions")**

Special Promotions for Price Regulated Services shall only be offered with the written consent or approval of URCA.

The SMP operator shall submit to URCA an application for any Special Promotion with a full description of the Special Promotion, including:

- the information required under Section 3.2.3.3 as they relate to the Special Promotion and the normal rates for the relevant Price Regulated Service;
- the rates applicable to the Special Promotion;
- the period of duration of the Special Promotion; and
- the terms and conditions applicable thereto.

URCA will review the submission for Special Promotions and notify the SMP operator of its decision, to not object to, or to block or propose amendments to a Special Promotion, within 10 working days of receipt of the submission. URCA may allow the Special Promotion for a trial period of 30 days before a final decision is issued.

A Special Promotion must cease within 90 days of the launch date.

A Special Promotion should not be similar to a Special Promotion that was available from the SMP operator at any time within the previous 120 days.

URCA may block a Special Promotion that is unlikely to be:

- transparent, non-discriminatory and objectively justifiable; or
- would have the effect of lessening competition in a relevant market.

A Special Promotion must be launched no later than 30 days from the date of URCA's written approval; otherwise the Special Promotion must be resubmitted for approval.

The SMP operator shall notify URCA in writing no less than 5 working days prior to the launch date of the Special Promotion.

The SMP operator shall for a period of 180 days maintain all relevant traffic data, revenue and marketing records pertaining to a Special Promotion and must provide these to URCA upon request.

Following a statement of no objection from URCA and prior to market introduction, the SMP operator shall publish in one or more newspapers with national circulation the eligibility criteria for any Special Promotion along with the permitted terms and conditions.

In some cases the operator may provide wholesale services which are used by other operators to compete with the operator in provision of the Price Regulated Service in question (for example, interconnection on a "retail minus" basis). In these cases, the operator must identify these and apply equivalent price decreases and associated changes to terms and conditions to the relevant wholesale services in such a manner that the competing operator could replicate the special promotion. Details of how the operator proposes to do this must be included in its submission.

3.2.3.5 **Bundling of Price Regulated Services**

The SMP operator may bundle, tie or offer new packages including price regulated services as long as each Price Regulated Service included in such a bundle, tied purchase or package is also available on a standalone basis on reasonable terms and conditions[15]. A bundle, tied products or package that includes at least one price regulated service shall be subject to retail price regulation. The SMP operator shall provide URCA with the costing information of each service included in the bundle, tied purchase or package and demonstrate to URCA that the price of the bundle is not anti-competitive and would not have the effect of lessening competition in a relevant market.

3.2.3.6 **Introduction of New Services**

An SMP operator that proposes to offer a new service shall at least 30 days before providing the new service file with URCA:

a. The proposed effective date for the introduction of the new service;

b. A description (commercial and technical) and name of the new service, including the tariffs/prices, terms and conditions applicable thereto; and

c. Data including a business plan with the details as listed in Section 3.2.3.3 to show that the price of the new service is transparent and non-discriminatory and would not have the effect of lessening competition in a relevant market.

A new service that is a combination of services comprising at least one Price Regulated Service is a Price Regulated Service.

The SMP operator shall not repackage an existing service as a new service. A new service must be materially different to existing services. If the new service is similar to an existing service, the SMP operator must explain the rationale for the launch of the new service.

URCA shall review an application to introduce a new service as follows:

a. Within 30 days of receipt of a completed (all information is provided in accordance with the submission requirements in this Section) application, URCA shall respond with one of the following:

- A statement of no objection;

[15] Bundling is the practice of forcing ('pure bundling'), or economically inducing ('mixed bundling'), customers to buy a 'bundle' consisting of two or more technically distinct products. Tying is the practice of making the purchase of one product or service conditional upon the purchase of another product or service.

- A rejection of the application with reasons;

- A notice that the application will go to public consultation and that therefore a final decision is withheld for the time being. URCA will consider whether there would be a need for public consultation based on factors such as the expected impact of the proposed new service, in terms of number of potential customers; revenue impact on the operator and expected impact on competition in the market place.

b. If a notice that the application must go to public consultation is issued, as soon as practicable URCA will allow the public a minimum of 30 days to respond to the consultation, unless otherwise stated by URCA; and

c. Within 30 days of the close of the public consultation, URCA will publish a final decision.

3.2.3.7 **Withdrawal and Discontinuation of Price Regulated Services**

The SMP operator shall not withdraw (to existing customers) and/or discontinue (to new customers) the provision of a Price Regulated Service without the prior written approval of URCA.[16]

The SMP operator shall submit to URCA, no less than 90 days prior to the proposed effective date, its proposal to withdraw and/or discontinue the provision of a Price Regulated Service.

The proposal shall include information such as:

- number and profile of current customers/users,

- sales revenue,

- volume of demand and costs,

- the proposed process to notify affected customers; and

- any proposed substitutes for the service.

Where appropriate this data should be provided for the last three (3) years, to allow URCA to assess the likely impact on the market of the withdrawal of the service.

URCA shall review an application to withdraw and/or discontinue a Price Regulated Service as follows:

a. Within 30 days of receipt of a completed (all information is provided in accordance with submission requirements in this Section) application, URCA shall respond with one of the following:

- A statement of no objection;

[16] For clarity, "withdraw" means to cease providing the service to existing or new customers. "Discontinue" means to cease offering the service to new customers whilst still providing it to existing customers.

- A rejection of the application with reasons;

- A notice that the application must go to public consultation as it may be of public significance. URCA will consider whether there would be a need for public consultation based on factors such as the expected impact of the withdrawal or discontinuation of the Price Regulated Service, in terms of number of customers affected; possible alternative products available to customers; revenue impact on the operator and expected impact on competition in the market place.

b. If a notice that the application must go to public consultation is issued, URCA will allow the public a minimum of 30 days to respond to the consultation unless otherwise stated by URCA; and

c. Within 30 days of the close of the public consultation, URCA will publish a final decision.

The SMP operator shall give its current users at least 60 days' notice of its decision to withdraw the provision of a Price Regulated Service. The SMP operator shall also publish, no less than 30 days from the effective date of the withdrawal or discontinuation, a notice of its decision to withdraw or discontinue the provision of a Price Regulated Service in one or more newspapers with national circulation.

4 Methodology

4.1 Introduction

This Section describes the Methodology that has been applied to determine the products that should be included in the four high level markets for which the Comms Act states there is an interim SMP presumption. The four markets with interim SMP presumptions and the corresponding SMP operators are:

- fixed voice - BTC;
- high speed data services and connectivity - CBL;
- mobile voice and mobile data services - BTC; and
- pay TV services - CBL.

URCA has an obligation in the Comms Act to define the types of obligations that should be applied to the operators presumed to have SMP. URCA therefore starts this process with two pre-defined parameters:

- The general high level markets, and
- The operators presumed to have SMP in each of the general high level markets.

A standard market review has neither of these two parameters pre-determined and it is therefore not possible (or appropriate) for URCA to conduct a full market review procedure in order to determine the types of obligation it should impose on each of the operators presumed to have SMP.

The analysis set out in this Preliminary Determination does not therefore constitute, and was not designed to constitute, a full market review.

The Methodology described in this Section inevitably draws on some of the same regulatory tools and processes as used in a full market review, but is specific to the current situation in The Bahamas and to URCA's duties under the transition provisions in the Comms Act.

Market reviews for *ex ante* obligations are always forward-looking as *ex ante* regulation is preventative and seeks to reduce the possibility of abuse of market power. It is therefore important that the time period covered by the review is determined and set out clearly before the actual review is undertaken.

This interim review is conducted for a period of 12-24 months, which is a relatively short period and reflects that the purpose is to determine the types of obligations required as safeguards against abuse of market power when the electronic communications markets in The Bahamas are opened for competition. The period chosen is influenced by the fact that the interim SMP presumptions become rebuttable 12 months after the Comms Act came into force.

The exact differences between a full market review and the interim market review Methodology employed in this determination are shown below:

Standard Market Review Process	**Interim Market Review Process**
Market definition • Identify all products and services offered in the electronic communications markets • Demand/supply side substitutability: - SSNIP[17]test (hypothetical monopolist test based on quantitative data analysis to derive initial relevant markets) • EU three criteria test to derive the markets susceptible to *ex-ante* regulation	**Market definition** • High level markets pre-defined • Check which products should remain in the high level market (excluding those for which URCA considers that *ex ante* regulation is not required), determined by: - SSNIP test (but using actual monopolist, i.e. presumed SMP operator, based on available data, rather than hypothetical monopolist test) • EU three criteria test to derive markets susceptible to *ex-ante* regulation
SMP • Actual Monopolist test • Other criteria	**Interim SMP presumption already determined by the Comms Act**
Remedies (obligations) • Total range of potential remedies to market failure • Criteria to identify level of remedies required • Identify recommended remedies	**Remedies (obligations)** • Total range of potential remedies to market failure • Criteria to identify level of remedies required • Identify remedies for new market entry ("hurdle" remedies acting as competition safeguards across the markets)

The detailed regulatory process of a full market review will be developed in due course in The Bahamas. This will be developed through consultation with the industry and implemented as competition develops.

The following Section sets out the Steps employed in this interim review process to determine which of the products provided by the licensee with the presumption of SMP should remain in each high level SMP market and be subject to *ex ante* regulation.

[17] Small but Significant Non-transitory Increase in Price.

4.2 Methodology Overview

The Steps of the Methodology used in this determination can be summarised as follows:

1. Describe the products offered by the licensee with presumed SMP in the high level market and the possible substitutes for them

Approach

The first Step is to describe all the products offered by the licensee with presumed SMP including affiliates in the high level market. Any possible substitutes for these products are also described. This includes both products already existing in The Bahamas and future products which URCA considers likely would be launched in the time period. The description should cover:

- Characteristics of products
- Prices
- Geographical reach of products
- Consumer behaviour around the products

Result

A description which enables a review of existing and future demand- and supply-side substitution for the products in question.

2. Assess the products for substitutability and determine whether products should remain in the high-level SMP market

Approach

Assess the substitutability of the products offered by the operator with presumed SMP, and the available substitutes, defined at Step 1 using the SSNIP test:

- Demand-side substitution considered first
- Supply-side substitution considered if relevant

For those products without effective demand- or supply-side substitutes, apply the EU "three criteria test" to the products to determine their susceptibility to *ex ante* regulation:

- Whether there is the presence of high and non-transitory barriers to entry;
- Whether there is the presence of a market the structure of which does not tend towards effective competition during the timeframe of this review; and

If either one or both of the preceding criteria are met, then ask:

- Whether the application of *ex post* competition law alone would not adequately address market failures that may arise.

Result

List of retail products which should remain in the high-level SMP market susceptible to *ex ante* regulation.

3. Repeat process for wholesale

Approach

Identify the wholesale products underlying the retail products identified through the analysis described above.

Subject these wholesale products to the same process of analysis (Step 2).

Result

List of wholesale products in the high level SMP market susceptible to *ex ante* regulation.

These Steps are discussed in more detail in the Section below.

4.3 Description of the steps

4.3.1 Step 1: Describe the market

A profile of the SMP licensee' portfolio including the portfolio of its affiliates is generated through identifying the products, their characteristics, price levels, geographic coverage, consumer behaviour and any other relevant information.

Additionally a portfolio of the possible substitutes for these products is built. The substitutes are grouped by provider and by whether URCA understands them to be current or future products. Current is defined as a product which is already available to consumers in The Bahamas and future is defined as a product which URCA believes could potentially be offered to consumers in The Bahamas within 12-24 months.

4.3.2 Step 2: Assess the products for substitutability and determine whether products should remain in the high-level SMP market

The default starting position is that all products offered by the SMP provider should be subject to *ex ante* regulation, but URCA considers that this could result in unnecessary regulatory intervention and therefore this Step seeks to evaluate whether any products can be excluded from the high level SMP market and thus not be subject to *ex ante* regulation.

This Section covers several aspects:

- substitution analysis using SSNIP[18] test, including comparisons of:
    - characteristics
    - price
    - coverage

[18] The SSNIP test is performed using the operator with presumed SMP as the *hypothetical monopolist*.

- testing whether the product is susceptible to *ex ante* regulation,
- geographic reach.

The tests described in this Section are performed under the assumption that no regulatory intervention takes place.

4.3.2.1 **Substitution analysis using SSNIP test**

This review takes as its starting point the statutory presumption of SMP for a particular licensee, hence the SSNIP test is not applied to a "hypothetical monopolist", but to the actual licensee (this form of the SSNIP test is conventionally used to assess market power rather than in the market definition stage)[19]. It asks whether there are substitutes for each of the products provided by the presumed SMP operator in the sector under consideration.

The SSNIP test typically analyses substitutability between products by asking "Can the presumed SMP operator profitably raise prices for a particular product by a small amount over the period in question?" For this review the question becomes:

Can the SMP operator <u>profitably</u> raise prices for a particular product by 5-10% for 12-24 months?

If the answer to the question is "yes", then it indicates that there are no effective substitutes for that product in the market in the 12-24 month time period. If the answer is "no", then it indicates that there must be either demand- or supply-side substitutes available for that product.

However, the fact that some demand or supply-side substitution is found in the market does not automatically mean that the product in question is subject to *effective* competition. URCA has defined effective competition as meaning that the level of substitutability is such that the price increase, as described above, is unprofitable to the SMP operator – i.e. that the likely loss of sales would be so high that the operator would not be compensated by the increased profits of the remaining sales.

The 12-24 month period considered in this SSNIP test is assumed to commence on publication of this preliminary determination.

Demand-side substitution

Demand-side substitution occurs when a consumer purchases an alternative product as a replacement for a product which has experienced the price increase. The price of a product is constrained on the demand side if the operator does not find it profitable in the 12-24 month time period to increase price because of the threat of a substantial number of customers switching to an alternative product (i.e. substitute).

The three main factors considered in assessing whether there is effective demand-side substitution are:

[19] It should be stressed that the SSNIP test does not test for the presence of a monopoly in the market, and that monopoly does not have to exist in order for there to be SMP.

- Characteristics. Here the characteristics of the possible substitutes are compared to the characteristics of the product being tested. Consumers are only likely to switch if the possible substitute matches the characteristics to a reasonable degree. URCA will use its discretion to make the judgment as to what is a reasonable match.

- Price. Here the prices of the possible substitutes, where available, are compared to the prices charged by the presumed SMP operator. As the analysis is based on the response to a price increase by the presumed SMP operator, consumers would likely only substitute to another product that would be cheaper than the increased price or which represents 'better value' overall for a similar price.

- Coverage. Possible substitutes can only be used by consumers where they are available. Therefore a possible substitute with considerably lower coverage than the product being tested is unlikely to be able to constrain the pricing of that product.

Other factors considered by URCA to be significant in the decision made by consumers to purchase a particular product, such as the bundling of services, are considered on a product by product basis as necessary.

URCA has presented the summary of this substitutability analysis at the end of each section of review for a given product in the portfolio of products offered by the SMP operator. The summary shows a ranking of the possible substitutes, evaluating each based on the factors described above. When ranking the characteristics, pricing and coverage of the substitutes, URCA has taken into consideration the experience by the consumer of using this substitute, URCA's knowledge of the existing market and operators, the experience and developments in other countries and any other relevant evidence available to URCA.

Supply-side substitution

Only if URCA concludes that there is no effective demand-side substitution will supply-side substitution be considered.

Supply-side substitution occurs when a company starts offering a product in response to a (5-10%) non-transitory price increase by the SMP provider. If the new competitor is successful this would result in demand-side substitution (i.e. customers of the SMP operator will switch to the new competitor). The same principle applies if an existing supplier changes the nature of its current supply – for example launches an existing service in areas not previously covered. The price of a product is constrained if the SMP operator would not find it profitable to increase its price because of the threat of other producers switching their supply to products that would act as demand-side substitutes.

4.3.2.2 **Determining whether each product is susceptible to *ex ante* regulation**

If it has been found that there is not effective demand- or supply-side substitution for the product, the next stage is to determine whether that product is susceptible to *ex ante* regulation. This is established using the European Union's ("EU") "Three Criteria Test", a regulatory test that has been developed as best practice in the EU. It assesses whether markets are susceptible to *ex ante* regulation by asking three questions:

- Whether the product is subject to high and non-transitory barriers to entry (e.g. high sunk costs or regulatory barriers such as exclusivity);

- Whether the market does not tend towards effective competition during the timeframe of this review; and

- If either one, or both of the preceding criteria are met, whether *ex post* action by itself is insufficient to address these market failures without additional regulatory intervention.

If either or both of the first two criteria are met, and the answer to the final criterion is 'no', then the product is judged to be susceptible to *ex ante* regulation. The application of this test results in a final set of products which remain in the high level SMP market and are susceptible to *ex ante* regulation.

Geographic reach

The degree to which there are substitutes for products may vary by geography. The geographic boundaries are considered within the SSNIP test and the reach of any demand- or supply-side substitutes identified. The test is applied on a product by product basis, meaning that if individual products are offered in different geographic areas, the regulatory remedies applied may vary in geographic reach.

4.3.3 **Step 3: Repeat process for wholesale**

The high level SMP market incorporates both retail and wholesale products.

The analysis is first performed on the retail products and then on the wholesale products because of the relationship between retail and wholesale products in the electronic communications markets. Electronic communications markets are characterised by networks which are difficult to replicate because of their scale, costs and other barriers to entry, such as access to land or the need for spectrum. In general these networks form the basis of the wholesale products offered by operators, for example access to infrastructure and interconnection. The retail products typically overlie these wholesale products – for example, a retail provider of voice calls relies on interconnection services in order to terminate calls on networks which they don't themselves operate. SMP for the retail product is often caused by barriers to entry in the provision of the wholesale product.

Therefore the wholesale products reviewed are those which support the retail products which have been found to be part of the high level SMP market susceptible to *ex-ante* regulation. This is because the purpose of *ex ante* regulation is to protect consumer interests through competition or outcomes which replicate competition. If there is already effective and sustainable competition at the retail level for a product, there is often no need to regulate the underlying wholesale products.

The wholesale products included in the analysis are a subset of the total wholesale products that could be used to support the retail products in question. This is because URCA considers it would be inappropriate to include all possible wholesale products in this interim process. In general the wholesale products chosen (where several options exist for supporting a given retail product) is the simplest in terms of technical complexity and cost/time to implement for the SMP provider.

Steps 1-2 which are described above are applied to the wholesale products in the same way as they were applied to retail; in the wholesale analysis the consumer becomes another provider of electronic communication services.

Due to the nature of the existing electronic communications markets in The Bahamas, summary tables of characteristics, price and coverage have not been included for the wholesale analysis.

Additionally, the nature of the products are such that for the majority of the high level markets there are no existing wholesale products offered to consumers. Therefore the analysis must be hypothetical in its nature and draw only on the experience in other countries and URCA's knowledge of the market, rather than on consumer experience or preference.

The result is the set of wholesale products in the high level SMP market susceptible to *ex ante* regulation underlying the set of retail products susceptible to *ex ante* regulation.

4.4 Selection of the types of obligations

Once URCA has determined the products susceptible to ex ante regulation, obligations will be selected to enable competition to evolve or to result in outcomes which replicate competition.

Any obligations selected by URCA will be driven by the objectives of:

- Promoting competition,
- Proportionality,
- Contributing to the development of sustainable competition,
- Promoting the interest of persons in The Bahamas.

When selecting the types of obligations, URCA has also indicated the relevant parameters for the implementation of these, including the pricing or costing principle to be applied and the time the SMP operator has to demonstrate full compliance.

Appendix 1 – Background to the fixed voice and data market

5 Description of retail products

In accordance with Step 1 of the Methodology, this Section will describe the products offered by the licensee with presumed SMP in the fixed voice and data market, in this case BTC. The description will cover:

- Characteristics of BTC's products
- Prices
- Geographical reach of the products; and
- Consumer behaviour around the products

This Section will also describe possible substitutes available to consumers for these products. This will include products already existing in The Bahamas and future products which URCA considers are likely to be launched in the 12-24 month period under consideration.

This will result in a list of products offered by BTC and its competitors to enable URCA to undertake the substitutability analysis considered in the next Section.

5.1 Products in the high level SMP market

This analysis has taken as its starting point the fixed voice and data services offered by BTC, because it is the operator presumed to have SMP in the market under the Comms Act. BTC offers a wide range of services with different specifications and prices. These can be grouped as follows:

- Fixed telephony access and local calling
- Domestic Long Distance (DLD) fixed calling[20] and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling[21]
- Voice over Internet
- Public payphones
- Broadband internet access
- National leased lines
- International leased lines

These products are described in more detail below.

[20] BTC's DLD calling service is calls made between locations on different islands in The Bahamas.
[21] BTC's ILD calling service is calls made to international locations.

5.1.1 **Fixed telephony access and local calling**

Fixed telephony access is access to a telephone line capable of delivering voice telephony and dial-up internet, at a fixed point on a subscriber's premises. Local calling is local (on-island) voice calling, both incoming and outgoing.

5.1.1.1 **BTC's current offering**

BTC offers a residential and a business fixed access service. The price of this service is $15 per month for residential customers, $12 per month for qualifying senior citizens and $36 per month for business service.

Evolution of BTC monthly fixed line rental ($/line)

Access Service	2000	November 2005-present	% Increase
Residential	10.75	15.00 12.00 (qualifying senior citizens)	57.89
Business	21.25	36.00	69.41

Source: URCA data obtained from BTC

BTC provides local fixed voice calling to subscribers of its fixed access service. Calls are "free", i.e. they are bundled with fixed access and incur no additional per-minute usage charge.

The monthly access charge also includes unlimited calls to emergency services, directory services, automated ancillary services (e.g. weather by phone, time of day, etc.) and mobile numbers. These calls are also "free"[22]. The standard one-time installation fee for fixed access service for both residential and business customers is $50.[23]

BTC also makes a range of Custom Local Area Signaling Services (CLASS) features available to residential and business subscribers with each package; these include: Voicemail, Call Forwarding, Three-way Calling, Call Waiting, Disable Call Waiting, Speed Calling, Subscriber Activated Call Blocking, Automatic Callback, Automatic Recall, Calling Number Name Delivery, Call Blocking, Anonymous Caller Rejection, Call Originated Trace, Distinctive Ring Call Waiting, Selective Call Acceptance, Selective Call Rejection, and Selective Call Forwarding. A small proportion of these services are provided for free with the rest costing between $2 and $10 per feature per month.

Fixed access includes the inclusion in the telephone directory, by which URCA means the automatic inclusion of a subscriber's name and number in BTC's telephone directory. BTC is the sole provider of the 'White Pages' telephone directory with alphabetical listings of the telephone subscribers in The Bahamas and the 'Yellow Pages' business telephone directory with numbers classified by business type or services provided, with paid advertising. BTC

[22] These calls are not strictly free as part of the cost will be included in the access charge and for mobile calls covered by receiving party pays.
[23] According to BTC's licence

publishes these directories in hard copy and has recently made them available in electronic form. Subscribers may request the exclusion of their telephone number from the telephone directory for no fee. Currently, mobile phone, Voice over Internet (ViBe) customers' listings and listings for System Resources Group Ltd. (SRG) subscribers are not automatically included in BTC's telephone directories but may be included upon payment of a fee of $3 per month[24].

Characteristics

BTC's fixed telephony access has the following characteristics:

- Demonstrates high quality of service metrics[25],
- Does not rely on the mains power supply and consequently will remain operational during a power outage,
- Includes automatic entry of the subscriber's number in BTC's telephone directory,
- Enables the consumer to have a geographic number,
- Includes free local calls,
- Includes free calls to automated ancillary services,
- Offers both a residential and a business product,
- Has simple hardware and software requirements, and
- Provides guaranteed access to emergency numbers.

Coverage

BTC's telephony access is available throughout The Bahamas.

5.1.2 Domestic Long Distance (DLD) fixed calling and domestic fixed calls to rated numbers

This is domestic voice calling available on the subscriber's premises, including both incoming and outgoing calls. It includes calls to:

- Numbers on other islands in The Bahamas
- Non-geographic numbers[26] for which there is a call charge[27] ("rated numbers")

[24] Source: BTC data
[25] Metrics such as reliability and call quality.
[26] Non-geographical numbers are telephone numbers available for private sale which, rather than being assigned to a particular telephone line or circuit, provide callers with a contact number which (aside from the 242 area code) gives no indication as to the geographical location of the line being called.

5.1.2.1 **BTC's current offering**

BTC provides domestic fixed voice calling to subscribers of its fixed access service. The prices are the same for both residential and business customers. The evolution of prices is shown in the table below:

Evolution of BTC's retail usage prices in The Bahamas ($/minute)

Service	2000-Oct. 2004 $/minute	Oct. 2004-present $/minute
DLD peak	0.40	0.18
DLD off-peak	0.30	0.18

Source: URCA data obtained from BTC

BTC also sells pre-paid debit cards ("phone cards") which can be used to make national calls from some phones in The Bahamas. These debit cards are a payment method for BTC's calling products (DLD and ILD). Therefore they are not treated as products in their own right.

Characteristics

Domestic long distance calling has the following characteristics:

- Demonstrates high quality of service metrics,
- Direct dialing [28],
- Simple hardware and software requirements.

Coverage

This service is available throughout The Bahamas to subscribers of BTC's fixed access service.

5.1.3 International Long Distance (ILD) fixed calling

This is international voice calling available at a fixed point on the subscriber's premises, both incoming and outgoing.

5.1.3.1 **BTC's current offering**

BTC offers international voice calling to subscribers of its fixed access service. The prices are the same for both residential and business customers, except that there is a bulk monthly discount on ILD calls for high volume business customers. The per-minute usage charges for these calls have progressively declined (see table below) in recent years.

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[27] Included in this category is calls to toll-free/freephone numbers, for which there is a charge to the entity commissioning the toll-free/freephone number, i.e. the receiving customer pays to receive the calls. URCA understands that this charge is normally commercially negotiated.

[28] The user can dial the telephone number they wish to reach directly into the phone, without the need to dial other numbers – such as a PIN code provided by an alternative carrier – beforehand.

Evolution of international retail prices in The Bahamas ($/minute)

Service	2000 $/minute	Oct. 2004 $/minute	November 2005 – present $/minute
ILD[29] – USA	0.99	0.51	0.47
ILD – Canada	1.25	0.54	0.50
ILD – Caribbean	2.25	0.70	0.66
ILD – Cuba		1.75	0.85
ILD all other	2.75-3.00	0.89	0.85

Source: URCA data obtained from BTC

BTC also sells pre-paid debit cards ("phone cards") which can be used to make international calls from some payphones in The Bahamas. These debit cards are a payment method for BTC's calling products (DLD and ILD). Therefore they are not treated as products in their own right.

Characteristics

International long distance calling has the following characteristics:

- Demonstrates high quality of service metrics,
- Direct dialing,
- Simple hardware and software requirements

Coverage

This service is available throughout The Bahamas to subscribers of BTC's fixed access service.

5.1.4 **Voice over Internet**

Voice over Internet (VoI) is a service that uses a broadband connection to carry voice calls over the internet rather than the traditional telephone network (typically PSTN[30]). VoI is a "nomadic" service: meaning that the subscriber is able to make and receive national and international telephone calls at different locations. Unlike mobile services, however, calls

[30]This is the traditional phone system, using circuit switching to make and maintain connections for the duration of a phone call. Also referred to as the 'landline' network, it uses a copper wire network to carry analogue voice data.

cannot be maintained when moving between all different locations (i.e. there is no "cell to cell handover").

To make a VoI call, the consumer requires specific software[31] and a broadband connection to the internet. The software will handle the call routing to make sure the call reaches the intended destination as well as providing the codec[32]. The software can be installed on a variety of hardware devices including traditional telephone handsets (using an adaptor that plugs into the telephone[33]) or a PC or wireless device such as a Personal Digital Assistant (PDA). BTC's service uses traditional telephone handsets, which can be cordless, with an adapter to enable its 'ViBe' service.

5.1.4.1 **BTC's current offering**

BTC offers various flat-rate VoI calling plans to Bahamian subscribers under the brand name ViBe. There are two plans available as set out below.

BTC Voice over Internet (ViBe) price plans

Package	Description	With iConnect[34] ($ per month)	Without iConnect ($ per month)
Base pack	500 minutes to the US, UK, Canada, Switzerland, Puerto Rico and The Bahamas	14.99	19.99
Value pack	Unlimited calling to the US, UK, Canada, Switzerland, Puerto Rico and The Bahamas	29.99	34.99

Source: BTC website

Calls to other international destinations are considered "out-of-plan" calls: charges range from $0.20 to $1.90 per minute, depending on the destination[35]. ViBe also allows connections to the police for emergency services[36].

To use the ViBe service, customers must also subscribe to a broadband internet service. They could use any broadband services and are not limited to BTC's DSL service.

The quality of the call is generally lower than traditional fixed line services and mobile services and is unpredictable. The main technical issues for voice services over the internet are:

[31] To convert the caller's analogue voice signal into a digital format, then compress and translate the digital signal into discrete Internet Protocol packets for transmission over the internet.
[32] A device or computer that is capable of encoding/decoding digital data.
[33] A traditional phone may be used by making use of an Analogue Telephone Adapter (ATA) or alternatively an IP Phone can be used.
[34] This is the price to a consumer if they also purchase the iConnect broadband internet service from BTC, this does not represent the price for both services.
[35] According to BTC's modified licence.
[36] According to BTC website.

- Latency – delays in packet delivery
- Jitter – caused by variations in the delay of packet delivery (i.e. variations in the latency)
- Packet loss – packets are lost during transmission or simply arrive too late to be used. Alternatively, the network actually 'drops' packets during periods of network congestion.

Characteristics

The key characteristics of the VoI ViBe product are:

- It has low to medium quality of service,
- Provides access to emergency numbers[37],
- It is nomadic, and
- Customer receives a geographic Bahamian phone number.

The quality of service characteristic does not vary significantly between different providers of VoI.

Coverage

This product has the same geographic reach as the broadband services it relies on. BTC has the greatest coverage of all the broadband services offered in The Bahamas and therefore the geographic reach of VoI is the same as that of BTC broadband. BTC broadband is available in New Providence, Grand Bahama, Abaco, Andros, Berry Islands, Bimini, Crooked Island, Eleuthera, Exuma, Inagua, Long Island and San Salvador[38]. Satellite Bahamas broadband[39] could be used in the areas not covered by BTC.

5.1.5 **Public payphones**

Public payphones are public telecommunications terminals which use coin- or card-based payment on a per-transaction basis. Payphones are located outdoors and indoors in public places. Also included are semi-public phones available on a restricted basis owing to their location, for example payphones on private premises such as restaurants. The provision of public payphones is a condition of BTC's Universal Service Obligation (USO).

5.1.5.1 **BTC's current offering**

Public payphones form part of BTC's universal service obligation. The coin rate for a local direct-dialed station-to-station or station-to-mobile call from a public payphone is 25¢ for up to 5 minutes.

Characteristics

[37] Although calls are not possible if there is a mains power outage.
[38] Source: information provided by BTC
[39] This is described later in this document.

Public payphones have the following characteristics:

- Demonstrates high quality of service metrics,
- Provides guaranteed access to emergency numbers,
- Direct dialing, and
- Does not require a subscription.

Coverage

BTC offers public payphone services in most islands of The Bahamas. URCA understands from BTC's routing guide that there are currently 64 locations in The Bahamas with access to a BTC payphone.

5.1.6 Broadband internet access

Broadband internet access is high data rate internet access, typically contrasted with dial-up access over a 56k modem. Higher speed broadband internet provides a considerably better user experience and functionality than low speed and dial-up internet and is therefore likely to be more attractive to consumers.

5.1.6.1 BTC's current offerings

BTC offers a range of ADSL[40] and sDSL[41] broadband products of up to 1Mbps to residential customers and 1.5Mbps to business customers over its fixed telecommunications network.

BTC residential ADSL internet prices

	Speed Kbps		Costs $			
Product	**Download**	**Upload**	**Installation**	**Activation**	**Monthly subscription**	**E-mail addresses**
AutoSpeed	384	128	30.00	24.99	34.99	1
CruiseSpeed	1024	384	30.00	24.99	54.99	1

Source: BTC website

BTC business ADSL internet prices

	Speed Kbps		Costs $			
Product	**Download**	**Upload**	**Installation**	**Activation**	**Monthly subscription**	**E-mail addresses**

[40] Asymmetric Digital Subscriber Line (ADSL) is a form of DSL, a data communications technology that enables faster data transmission over copper telephone lines than a conventional voiceband modem can provide. The distinguishing characteristic of ADSL over other forms of DSL is that the volume of data flow is greater in one direction than the other, i.e. it is asymmetric. Providers usually market ADSL as a service for consumers to connect to the Internet in a relatively passive mode: able to use the higher speed direction for the "download" from the Internet but not needing to run servers that would require high speed in the other direction. sDSL is Symmetric Digital Subscriber Line.

[41] Symmetric Digital Subscriber Line (sDSL) refers to internet access technologies based on DSL that offer symmetric bandwidth upstream and downstream. It is contrasted with ADSL technologies, where the upstream bandwidth is lower than the downstream bandwidth.

BizSpeed 1	256	128	75.00	24.99	75.00	3
BizSpeed 2	384	128	75.00	24.99	105.00	3
LightSpeed 1	512	256	75.00	24.99	300.00	5
LightSpeed 2	1.5Mbps	512kbps	75.00	24.99	490.00	10

Source: BTC website

BTC also offers an sDSL service to business customers, with both download and upload speeds of up to 1.5Mbps.

BTC business sDSL internet prices

	Speed Kbps		Costs $		
Product	**Down**	**Up**	**Installation**	**Activation**	**Monthly subscription**
WARPSpeed 1	512	512	200.00	-	400.00
WARPSpeed 2	1024	1024	200.00	-	590.00
WARPSpeed 3	1.5Mbps	1.5Mbps	200.00	-	850.00

Source: BTC website

Broadband can be bought together with BTC's standard phone line or separately. When purchased separately it is known as 'naked DSL'.

BTC naked DSL internet prices[42]

	Speed Mbps		Costs $		
Product	**Down**	**Up**	**Security deposit**	**Activation**	**Monthly subscription**
Autospeed	Up to 1	N/A	180	-	45.00
Cruisespeed	Up to 2	N/A	180	-	59.99

Source: Information provided by BTC

Characteristics

BTC's broadband internet access has the following characteristics:

- The service is 'always on', no dialling is required. This allows the user to maintain a permanent connection to the internet;
- High download speeds are possible. BTC offer speeds ranging from 0.5Mbps to 1.5Mbps[43]; and

[42] BTC data provided to URCA.

[43] International definitions of "high speed" broadband vary. The improvement in functionality is continuous and therefore there is no natural distinction between low speed and high speed broadband. URCA has considered the range of speeds available from possible substitutes and compared them to CBL. Download speeds are considered to be more important than upload speeds

- Broadband access is capable of carrying more than one type of service (e.g. internet, TV, voice[44]) simultaneously.

Coverage

BTC's broadband is currently available in New Providence, Grand Bahama, Abaco, Andros, Berry Islands, Bimini, Crooked Island, Eleuthera, Exuma, Inagua, Long Island and San Salvador[45].

5.1.6.2 **Possible future BTC products**

URCA understands that BTC is currently in the process of migrating to Next Generation Network (NGN)[46], the aim being to have an all-IP network within the next few years[47].

NGN and advanced DSL technology such as ADSL2+ and VDSL should enable higher speed broadband. It could also enable IPTV, which would technically enable BTC to provide both TV and internet on its own network in a manner similar to CBL. However, BTC's ability to launch IPTV will be dependent upon its compliance with any *ex ante* regulation imposed on it due to its presumed SMP in other high-level markets. Consequently, URCA does not believe that BTC will be able to complete its roll-out of NGN and comply with its *ex ante* obligations within the time period considered in this review. BTC's NGN service will not be considered further in this review.

Developments in BTC's mobile infrastructure could allow it to offer services which would be possible substitutes for its broadband access service. URCA does not believe that BTC has any plans in the 12-24 month time period considered in this review to expand further its mobile infrastructure, therefore this service is not considered further in this review.

BTC may also be able to develop high speed mobile data products by upgrading its existing mobile infrastructure. URCA does not know BTC's plans but these products could theoretically include 3G and WiMAX.

3G would enable various data capabilities which could present alternatives to fixed broadband access. WiMAX is a telecommunications technology that provides wireless transmission of data using a variety of transmission modes, from point-to-multipoint links to portable and fully mobile internet access. The technology provides up to 3 Mbps broadband speed.

However, it is URCA's view that BTC is unlikely to launch 3G or WiMax within the 12-24 month time period under review, because of the considerable licensing and infrastructure requirements. Consequently 3G and WiMax services are not considered further in this review.

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for residential customers especially, as it is the download speed which is mainly experienced by the consumer as they draw content from the World Wide Web and access websites.

[44] BTC is currently prohibited from providing TV services. It does however provide voice and broadband on the same connection simultaneously.

[45] Source: information provided by BTC

[46] Next Generation Networking, is the term given to describe a telecommunications packet-based network that handles multiple types of traffic (such as voice, data and multimedia)

[47] Source: information provided by BTC in response to the Access and Interconnection consultation indicates completion in 2011.

5.1.7 National leased lines and International leased lines

This is private ("leased") capacity for businesses, providing either LAN-to-LAN or LAN-to-Internet connectivity within the country (national) and overseas (international).

5.1.7.1 BTC's current offering

BTC offers digital and analog national and international leased lines.

Analog Leased Lines

BTC provides national and international leased lines between The Bahamas and most areas of the United States, Canada and the Caribbean countries.

The Analog Leased Line is commonly available and used in speeds of 9.6bps to 2.048Mbps for use in the transmission of voice and data.

Digital Leased Lines

The Digital Leased Line is sometimes referred to as IBS Services (International Business Satellite Service). Customers are charged an initial installation fee and a monthly fixed charge depending on the speed of the line, the contract period and the distance between the two ends of the line.

The Digital Leased Line transmits via fibre cable at speeds of 56kbps up to 2.048 Mbps. The services are termed as follows:

1. Digital Local Loop
2. Domestic Digital Circuit
3. International Digital Service

1. Digital Local Loop

The Digital Local Loop service within Nassau, or The Bahamas, transmits over analog cable either through copper wire, T-screen or Fibre Optics. Once the circuit is within a 3-mile radius from BTC's Transmission Centre, digital connectivity can be accomplished.

2. Domestic Digital Circuit

The Domestic Digital service represents the link between New Providence and the Family Islands. The service transmits via a Digital Micro-Wave Link.

3. International Digital Service

The International Digital Circuit transmits via fibre cable between Nassau, The Bahamas and Vero Beach, Florida, using one of the registered International Carriers. The local customer is connected to BTC's Transmission Centre via Digital Local Loops.

BTC also offers a satellite service as part of its leased line offering, connecting via satellite rather than sub-sea cable. URCA believes this may be used for resilience and is likely to be at a lower quality than cable.

Prices

BTC Digital local loop leased line via cable prices

		Monthly charge $			
Speed	**Installation $**	**Standard**	**1-year sign-up at 5% discount**	**3-year sign-up at 10% discount**	**5-year sign-up at 15% discount**
56kb	140.00	73.50	69.83	66.15	62.48
128kb	140.00	98.00	93.10	88.20	83.30
256kb	140.00	122.50	116.38	110.25	104.13
384kb	140.00	147.00	139.65	132.30	124.95
512kb	140.00	171.50	162.93	154.35	145.78
786kb	140.00	196.00	186.20	176.40	166.60
1,024Mb	140.00	220.50	209.48	198.45	187.43
1,544Mb-T1/DS1	140.00	245.00	323.75	220.50	208.25
2,048Mb	420.00	343.00	325.85	308.70	291.55
3,066Mb	490.00	441.00	418.95	396.90	374.85
45Mb	1,400.00	6,480.00	6,156.00	5,832.00	5,508.00
155Mb-STM1/OC3	5,000	85,000.00	80,750.00	76,500.00	72,250.00

Source: BTC website
Note: Termination equipment charged separately.

Domestic/Island to Island Line Charges with Discounts

		Monthly charge $			
Speed	**Installation $**	**Standard**	**1-year sign-up at 5% discount**	**3-year sign-up at 10% discount**	**5-year sign-up at 15% discount**
64kb	350.00	343.00	325.85	308.70	291.55
128kb	350.00	392.00	372.40	352.80	333.20
256kb	350.00	441.00	418.95	369.90	374.85

384kb	350.00	490.00	465.50	441.00	416.50
512kb	350.00	539.00	512.05	485.10	458.15
786kb	350.00	588.00	558.60	529.20	499.80
1,024Mb	350.00	637.00	605.15	573.30	541.45
1,544Mb-T1/DS1	350.00	686.00	651.70	617.40	583.10
2,048Mb	420.00	784.00	744.80	705.60	666.40
3,066Mb	490.00	882.00	837.90	793.80	749.70
10Mb	650.00	2,876.71	2,732.88	2,589.04	2,322.95
45Mb	2,000.00	12,960.00	12,312.00	11,664.00	11,016.00
155Mb-STM1/OC3	5,000.00	44,738.63	42,501.70	40,264.77	38,207.84

Source: BTC website
Note: Local Loop charges included. Termination equipment charged separately.

BTC international leased line via cable prices

		Monthly charge $			
Speed	**Installation $**	**Standard**	**1-year sign-up at 5% discount**	**3-year sign-up at 10% discount**	**5-year sign-up at 15% discount**
64kb	1,050	501.20	476.14	451.08	426.02
128kb	1,050	1,003.10	952.95	902.79	852.64
256kb	1,050	1,836.10	1,744.30	1,652.49	1,560.69
384kb	1,050	2,507.40	2,382.03	2,256.66	2,131.29
512kb	1,050	3,265.50	3,102.23	2,938.95	2,775.68
786kb	1,050	3,731.70	3,545.12	3,358.53	3,171.95
1,024Mb	1,400	4,198.60	3,988.67	3,778.74	3,568.81
1,544Mb-T1/DS1	1,400	4,900.00	4,655.00	4,410.00	4,165.00
2,048Mb	1,400	5,597.90	5,318.01	5,038.11	4,758.22
3,066Mb	2,100	6,664.00	6,330.80	5,997.60	5,664.40

10Mb	4,000	21,735.16	20,648.40	19,561.64	18,474.89
45Mb	5,000	50,000.00	47,500.00	45,000.00	42,500.00
155Mb-STM1/OC3	5,000	85,000.00	80,750.00	76,500.00	72,250.00

Source: BTC website
Note: Local Loop charges included. Termination equipment charged separately.

BTC international leased line via satellite prices

		Monthly charge $			
Speed	**Installation $**		**1-year sign-up at 5% discount**	**3-year sign-up at 10% discount**	**5-year sign-up at 15% discount**
DS-3	3,000	50,000	47,500	45,000	42,500

Source: BTC website

Characteristics

At the retail level, the main distinguishing features of leased lines are that they:

- Are capable of carrying more than one type of service (i.e. internet, TV, voice[48]) simultaneously,
- Provide end-to-end capacity dedicated to the user's use,
- Provide symmetric bi-directional bandwidth, and
- Provide speeds ranging from 56Kbps to 155Mbps.

Coverage

All the BTC products described above are currently available in New Providence, Grand Bahama, Abaco, Andros, Berry Islands, Bimini, Crooked Island, Eleuthera, Exuma, Inagua, Long Island and San Salvador.

5.2 Possible substitutes

This Section outlines the products which could be possible substitutes for BTC's products. It covers those products which:

- Are currently available; and

[48] BTC is currently prohibited from providing TV. It does however provide voice and broadband on the same connection simultaneously.

- Could become available within the time period under review.

Future products, including both new products and expansions or improvements in current products, have only been considered when URCA believes that there is a reasonably high probability of their being available to consumers to the extent that they could constrain BTC's prices in the 12-24 month period under review.

The possible substitute products are organised by provider:

- SRG
- International Voice over Internet (VoI) providers
- BTC Mobile
- Satellite Bahamas
- CBL
- Other Internet Service Providers (ISPs)
- New entrants.

5.2.1 **SRG**

URCA does not have detailed information about all of SRG's products, network and prices. Based on the information available, URCA considered whether SRG currently offers, or could possibly offer in the future, products which could substitute for the following BTC products:

- Fixed telephony access and local calling
- Domestic Long Distance (DLD) fixed calling[49] and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling[50]
- Voice over Internet
- Public payphones
- Broadband internet access
- National leased lines
- International leased lines.

[49] BTC's DLD calling service is calls made between locations on different islands in The Bahamas.
[50] BTC's ILD calling service is calls made to international locations.

5.2.1.1 **Current SRG products**

Fixed access and calling

SRG (trading as IndiGO) offers a fixed access product comparable to BTC's product to business customers, known as "IndiGO for business". This uses SRG's fixed wireless access network. SRG has interconnection arrangements with BTC to terminate domestic calls on its network and vice versa. The international transit of the calls is via an international fibre link.

The service includes features such as voicemail, fax server, call accounting and unified messaging integration services. URCA understands that the reliability and quality of the service is high, and the hardware and software requirements are simple.

Subscribers to the SRG access service are not automatically entered into the BTC telephone directory but may gain entry by payment of $3 per month.

URCA understands that the receiver equipment for this service requires mains power at the customer's premises and therefore this service would not function during a power outage. Subscribers receive their own personal geographic number, and calls to emergency services are possible through interconnection with BTC's emergency services termination services.

SRG prices for access and calling are shown below.

SRG fixed access prices[51]

PRI/ T1[52] **Circuit Service Fees**	**$**
Installation Fee	960 per circuit
1-Year Agreement	444/ month
3-Year Agreement	408/ month
5-Year Agreement	384/ month

Analog Trunks Service Fees	**$**
Installation Fee	40 per line
Service Charge	35/ month

[51] Source: SRG data provided to URCA

[52] A PR1/ T1 is a full-duplex circuit consisting of 24 channels, which transmits and receives 1.544 Mbps concurrently.

SRG Fixed access calling prices[53]

Long-Distance Call Rates	
Destination	**Rate per minute $**
Bahamas Islands	0.17
United States	0.39
Canada	0.41
Caribbean	0.59
Cuba/ All Other Countries	0.69
Volume Discount Plan • >$5,000 Long-Distance Usage = 5% discount • >$10,000 Long-Distance Usage = 7.5% discount • >$15,000 Long-Distance Usage = 10% discount • >$50,000 Long-Distance Usage = 20% discount	

Prepaid phone cards

SRG also sells prepaid phone cards which contain credit for making phone calls. They are targeted largely at the residential market. They can be used to call from any touch tone phone, including pay phones, BTC fixed phones and mobile phones. Customers are given a PIN when they buy the phone card. This must be dialled before the telephone number of the receiving party. SRG's pre-paid phone cards can be used for local, domestic long distance and international long distance calls. This way of calling is known as two-stage calling.

Calls using the SRG phone cards are usually originated through the BTC access network. Domestic calls will remain on BTC's network, except in cases where the receiving party is an SRG customer. The international transit of the calls is performed on an international leased line.

The cards come in units of $5, $10 or $20. They are sold at major retailers and are therefore quite easily available to most Bahamian residents. The prepaid rates are shown below.

[53] Source: SRG data provided to URCA.

SRG prepaid calling rates[54]

Destination	Rate per minute $
Family Islands	0.17
USA/Canada	0.44
Caribbean	0.49
Cuba	0.99
Rest of World[55]	0.69

Voice over Internet

SRG offers a VoI product called Onephone to residential and business customers. The product requires:

- A broadband connection such as Cable, DSL or IndiGO Wireless[56] (bought from CBL, BTC or SRG, respectively)
- An IndiGO phone adaptor
- Any touch-tone phone, corded or cordless.

[54] Source: SRG website as at August 2009.
[55] With some minor exceptions.
[56] This service is only available for business customers.

Onephone users get access to emergency services; these calls interconnect with BTC, who terminates the calls with the police. "On-net" calls to other Onephone subscribers are free and there are a number of price plans for other calls, shown below.

Onephone prices

Package	Description	Price ($ per month)
Local calling plan	Unlimited Onephone to Onephone calls, unlimited incoming and outgoing calling, low rates to Grand Bahama and Abaco	9.95
Basic plan	Local phone number, 500 minutes to US, Canada & selected European countries	19.95
Onephone complete	Local phone number, 250 minutes to US, Canada, the Family Islands and other neighbouring Caribbean Islands	29.95
Value plan	Local phone number, unlimited minutes to US, Canada & selected European countries	34.95

Payphones

SRG also offers public payphone services, either on its own or through third party agents. SRG's payphones are mainly targeted at non-residents at a few select locations such as hotels, airports, marinas, docks and shopping centres.

URCA does not have detailed information about the price or precise locations of these. The total number is not believed to be large. URCA understands that the quality of service is high and that direct dialing is possible.

Broadband internet access

SRG has access to 2.5GHz spectrum in The Bahamas, which can be used to deliver broadband services. However, SRG does not appear currently to focus on the deployment of broadband.

URCA does not have detailed information about SRG's broadband services but understands that it does offer wireless internet to business customers only, at speeds of around 1.5Mbps. URCA understands that SRG's market share for this product is low[57]. It is therefore not considered a core service for SRG. The SRG high-speed broadband products are therefore not considered within the substitution analysis.

[57] Information provided by SRG.

Leased lines

URCA understands that SRG offers high speed leased lines to business customers using wireless technology, which could possibly be substitutes for the BTC leased lines. However, SRG does not currently have a strong presence in the market. Its offered services include analog circuits and digital T1 trunks[58]. Leased lines do not appear to be a significant part of SRG's operations and therefore it is not considered within the substitution analysis.

Coverage

SRG's licence currently restricts its operations to New Providence, Grand Bahama and Abaco. SRG's fixed voice service is available in these locations. The VoI product is currently available in only New Providence and Grand Bahama for residential customers, and only New Providence and Freeport for business customers. SRG has suggested that it may roll the service out in Abaco as well.

SRG's prepaid phone cards can be used on any BTC phone and therefore have coverage throughout The Bahamas.

5.2.1.2 **Possible future SRG products**

URCA is not aware of any plans for new services, or expansions of current services, to be launched by SRG within the 12-24 month review period.

5.2.2 **Various international VoI providers**

International VoI providers could provide a possible substitute for:

- Fixed telephony access and local calling
- Domestic Long Distance (DLD) fixed calling[59] and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling[60]
- Voice over Internet

5.2.2.1 **Current products offered by VoI providers**

The first VoI services offered in The Bahamas were offered by specialist international VoI companies. The principal providers are magicJack, Vonage and Skype, all of whom offer similar services and prices.

All international VoI services require access to a broadband connection to function at a reasonable standard; the broadband connection must be purchased from a broadband access provider. The customer must also have specialist software and hardware.

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[58] A T1 circuit is made up of 24 8-bit channels, each channel being a 64 kbit/s multiplexed carrier circuit. A T1 circuit can also be a full-duplex circuit, which means the circuit transmits and receives 1.544 Mbps concurrently.

[59] BTC's DLD calling service is calls made between locations on different islands in The Bahamas.

[60] BTC's ILD calling service is calls made to international locations.

Unlike BTC's and SRG's VoI services, customers of international VoI providers cannot have a Bahamian geographic number. Furthermore, calls to emergency services are not possible. Like BTC's and SRG's VoI services, these services are nomadic. A continuous connection is not possible, however, when moving from location to location.

The table below contains a sample of packages offered by the principal providers of VoI services.

Sample of magicJack, Vonage and Skype prices

Provider	Package	Description	Monthly rate
Vonage	V-Plan 2	Plan includes: Unlimited calls to landlines in 15 countries ; Unlimited calls to mobiles in 2 countries; Unlimited Vonage-to-Vonage calls	$7.99 per month
	V-Plan 5	As above but unlimited landline calls to 45 countries and to mobiles in 5 countries	$18.99 per month
Skype	Unlimited World	Unlimited calls to landlines (and some mobiles) in over 40 countries worldwide, not including The Bahamas	$12.95 per month, $0.89 per minute to make calls to mobiles and land lines in The Bahamas
magicJack	-	Free calls to the United States, Canada, Puerto Rico and the US Virgin Islands	$39.95 for the device, plus $19.95 for each year after the first year which is free ➔ equivalent of $3.33 per month for first year, then $1.66 per month for subsequent years

Coverage

Because the service requires a broadband connection, it is limited by the availability of broadband. The two main providers of broadband services in The Bahamas are BTC and CBL, both of whom have near complete coverage of the Bahamian population.[61]

5.2.2.2 **Possible future VoI products**

URCA is not aware of any new products in this area which may emerge in the 12-24 month timeframe.

[61] Data provided to URCA

5.2.3 **BTC mobile**

5.2.3.1 **Current BTC mobile products**

BTC's mobile telephony service provides a possible substitute for:

- Fixed telephony access and local calling
- Domestic Long Distance (DLD) fixed calling[62] and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling[63]
- Voice over Internet
- Public payphones

BTC offers a range of mobile voice services. Mobile voice includes mobile-to-fixed calls, mobile-to-mobile calls, fixed-to-mobile calls, incoming/outgoing international calls to/from mobile, access to directory information services and Bahamian emergency numbers, and inbound/outbound roaming. The penetration rate for mobile is estimated to be close to 100%%[64].

Approximately 85%[65] of mobile subscribers in The Bahamas use a prepaid service. Prepaid calling cards are readily available to the Bahamian public in denominations of $5, $10, $20, $50, and $100. Prepaid mobile customers do not pay a fixed monthly charge and do not receive a monthly bill. Users pre-purchase blocks of airtime via so called 'scratch cards', with PIN numbers which allow them to access entitlement. The pre-purchased airtime charge must be used within a specific time.

URCA believes that the quality of service of BTC mobile is lower than BTC fixed voice. Although URCA has not conducted a formal survey on BTC's customer base, anecdotal evidence indicates that consumers are dissatisfied with the level of service quality received from BTC's mobile services. For example, in-building coverage and network congestion are problems which have been identified.

BTC Pre-paid local calling prices

Time/date	$/minute
Peak (7:00 a.m. to 6.59 p.m.)	0.33
Off Peak (7:00 p.m. to 6.59 a.m.)	0.15
Weekend	0.20

A pre-paid customer must pay the airtime charge (local calling price) as well as an additional DLD charge per minute of the call. **DLD Mobile Calling**

[62] BTC's DLD calling service is calls made between locations on different islands in The Bahamas.
[63] BTC's ILD calling service is calls made to international locations.
[64] BTC data provided to URCA.
[65] Subscriber data provided by BTC to URCA.

Time/date	Airtime: $/minute	Additional DLD charge $/minute
Peak (7:00 a.m. to 6.59 p.m.)	0.33	0.18
Off Peak (7:00 p.m. to 6.59 a.m.)	0.15	0.18
Weekend	0.20	0.18

BTC also offers six distinct post-paid mobile voice packages. These packages allow the subscriber to pay a monthly subscription fee and receive a combination of airtime usage and calling features. Two of the post-paid packages include a specified number of monthly text messages. When customers exceed their allotted airtime usage or number of text messages for the month, they are billed at the relevant out-of-plan prices. Only 15% of BTC's subscribers subscribe to post-paid packages. Details of these packages are specified in the table below.

Post-paid Pricing Plans

Price/month	Offering (minutes)	Package Features	Out of Plan Prices for Additional Minutes[66]
$10		A la carte pricing	$0.20/minute week days, $0.10/minute evenings, $0.15/minute weekends
$19.99	100 Domestic Airtime Usage	Includes: Caller ID, Voicemail	$0.20/minute week days, $0.10/minute evenings, $0.10/minute weekends
$29.99	160 Domestic Airtime Usage	As package above	As package above
$59.99	375 Domestic Airtime Usage	Includes: Caller ID, Call Waiting, Call Forwarding, Voicemail, Multi Party Calling	$0.15/minute week days, $0.10/minute evenings, $0.10 /minute weekends
$99.99	650 Domestic Airtime Usage	As above plus 100 Text Messages	As package above
$139.99	1,100 Domestic Airtime Usage	As above plus 300 Text Messages	$0.10/minute week days, $0.10/minute evenings, $0.10/minute weekends

[66] Week days: Monday through Friday inclusive; Weekends: Saturday and Sunday; Evenings: 7:00 p.m. to 6.59 a.m.

International call prices apply to both pre- and post-paid mobile products. A pre-paid customer must pay the airtime charge (local calling price shown above) as well as the international charges. A post-paid customer must pay any airtime in excess of the minutes allotted to them through their plan as well as the international charges:

Prices for Outgoing ILD Calls (prepaid/post-paid)

Destination	($/minute)
USA	0.47
Canada	0.50
Caribbean	0.66
Cuba	0.85
Rest of World	0.85

Source: Data provided to URCA

5.2.3.2 **Possible future BTC mobile products**

Developments in BTC's mobile infrastructure could enable it to offer services which would be possible substitutes for its fixed broadband access service.

URCA does not know BTC's plans but these products could theoretically include 3G and WiMAX. 3G would enable various data capabilities which could present alternatives to fixed broadband access. However, it is URCA's view that BTC is unlikely to launch 3G within the time period under review, because of the considerable licensing and infrastructure requirements.

WiMax is a telecommunications technology that provides wireless transmission of data using a variety of transmission modes, enabling fixed voice, fixed broadband, and mobile broadband. WiMax may also enable mobile voice in the future. The technology currently enables up to 3 Mbps broadband speed.

5.2.4 **Satellite Bahamas**

Satellite Bahamas offers broadband access products which could substitute for BTC's broadband access product.

Broadband internet access

Satellite Bahamas offers a range of broadband packages:

Satellite Bahamas internet packages and prices

	Speed Mbps			Costs $		
Product	**Down**	**Up**	**Email addresses**	**Equipment – purchase**	**Equipment – monthly lease**	**Monthly subscription**
	1	0.125	5	250	50 then 10/month	60
Pro	1.2	0.2	5	250	50 then 10/month	70
ProPlus	1.6	0.25	5	250	50 then 10/month	80
Elite	2	0.3	10	250	50 then 10/month	120
ElitePlus	3	0.3	10	250	50 then 10/month	190
ElitePremium	5	0.3	10	250	50 then 10/month	350

Source: Satellite Bahamas website, which links to Hughesnet website, the U.S. company that physically delivers the broadband service.

Coverage

These services are available throughout The Bahamas, although location and local obstruction can affect the quality of signal received in a very small number of homes[67].

5.2.5 **CBL**

5.2.5.1 **Current products**

CBL offers products which could be substitutes for the following:

- Broadband internet access
- National leased lines
- International leased lines

[67] The company website suggests 3% of homes attempting to use the service will be affected.

Broadband internet access

CBL offers a broadband internet service to both residential and business consumers. The residential service offers asymmetric and download speeds range from 1.5Mbps to 9Mbps. The business service offers symmetric and speeds range from 0.5Mbps to 1.5Mbps.

There are several packages differentiated by service level and price:

CBL internet packages and prices

	Speed Mbps				Costs $		
Product	**Download**	**Upload** [68]	**Download limit per month**	**Webspace MB**	**Cable modem**	**Ethernet card (if applicable)**	**Monthly subscription**
Residential packages							
CoralWave Geo	1.5	0.25	75Mb or 10 hours	5	99.95	40-100	10.70
CoralWave Jazz	1.5	0.25	50 hours	5	99.95	40-100	21.70
CoralWave Lite	3	0.5	No limit	10	99.95	40-100	38.70
CoralWave Groove	6	0.75	No limit	10	99.95	40-100	55.70
CoralWave Rock	9	1	No limit	20	99.95	40-100	70.70
Business packages							
CoralWave Pro	0.5-1.5	0.5-1.5	No limit	-	Free	N/A	Not published

Source: CBL website

In order to receive the residential services, customers **must** also subscribe to a CBL cable TV package. The minimum cost of this cable TV package is $30 per month. Therefore the minimum monthly subscription payment to purchase internet from CBL can be thought of as **$40.70** plus the installation costs, although many subscribers will also require the TV service and not view this as an additional cost.

Coverage

CBL's broadband service is provided over CBL's cable infrastructure. It requires both on-island cable infrastructure and inter-island backhaul capacity, which is provided by sub-sea cable. It currently has a geographic coverage of New Providence, Grand Bahama, Abaco, Eleuthera and partial coverage on other islands.

[68] 1Mbps is equivalent to 1024Kbps.

Data circuits[69]

CBL offers national and international data circuits to business consumers at speeds ranging from 1.5Mbps to 2.4Gbps. It uses its cable network within The Bahamas and the international fibre link of its subsidiary, Caribbean Crossings Ltd. ("CCL"), to provide these services.

CBL does not publish its prices for data circuits on its website.

Coverage

CBL's data circuit service is currently provided over CBL's cable infrastructure, meaning it has a geographic coverage of New Providence, Grand Bahama, Abaco and Eleuthera. It connects internationally via CCL's international fibre link.

5.2.5.2 **Possible future CBL products**

URCA understands that CBL[70] could offer fixed telephony in the future using its existing cable infrastructure. This could allow it to provide the following products:

- Fixed access
- Local calling
- Inter-island and other charged calling
- International calling

URCA understands from CBL that the modifications required to its network to offer voice services would be minor. In accordance with the Comms Act, CBL will be allowed to provide fixed access once it has demonstrated compliance, to the satisfaction of URCA, with *ex ante* regulation imposed on it due to its SMP in other communications markets.

In these circumstances, CBL may choose to provide fixed access and it is possible that this will happen within the 12-24 month time frame. However, negotiating and implementing the necessary interconnection agreements will take some time.

CBL's network has a high capacity and has a reasonably high reliability in its provision of TV and internet. It is therefore likely that CBL's fixed access would have similar quality of service standards to BTC fixed telephony access.

As CBL is not currently allowed to offer voice services, URCA does not know how this service would be priced, or what the other characteristics of this service would be. URCA assumes that the voice service would rely on the cable modem which is dependent on mains power, and therefore it would not function during a power outage.

Coverage

[69] The term data circuits is CBL's product name for its leased lines products.
[70] CBL is currently prevented from offering voice services.

This product could have the same geographic reach as CBL's cable infrastructure.

5.2.6 Internet Service Providers

A number of ISPs in The Bahamas offer internet products which could be substitutes for BTC's broadband access product.

5.2.6.1 Current ISP products

The ISPs offer wireless broadband and dial-up internet to residential and business consumers. Some of the products are at speeds above 1.5Mbps.

Speedway[71] is an example of an ISP providing speeds under 1.5Mbps only. It offers wireless internet at speeds of 256kbps for $49 per month, 384kbps for $59 per month, 512kbps for $75 per month, and 1Mbps for $99 per month.

Pro's Wireless is an example of an ISP providing speeds of 1-2Mbps. URCA does not have access to detailed information about its network but understands that it offers speeds of 1-2Mbps for $30 per month to residential customers, and $50 per month to business customers. There is an internet activation fee of $99 and the first month's subscription is free after installation[72].

Coverage

The geographic reach of the ISPs is currently limited to the most populated islands. Future Net, for example, only offers its services in New Providence.

5.3 Consumer behaviour in the market

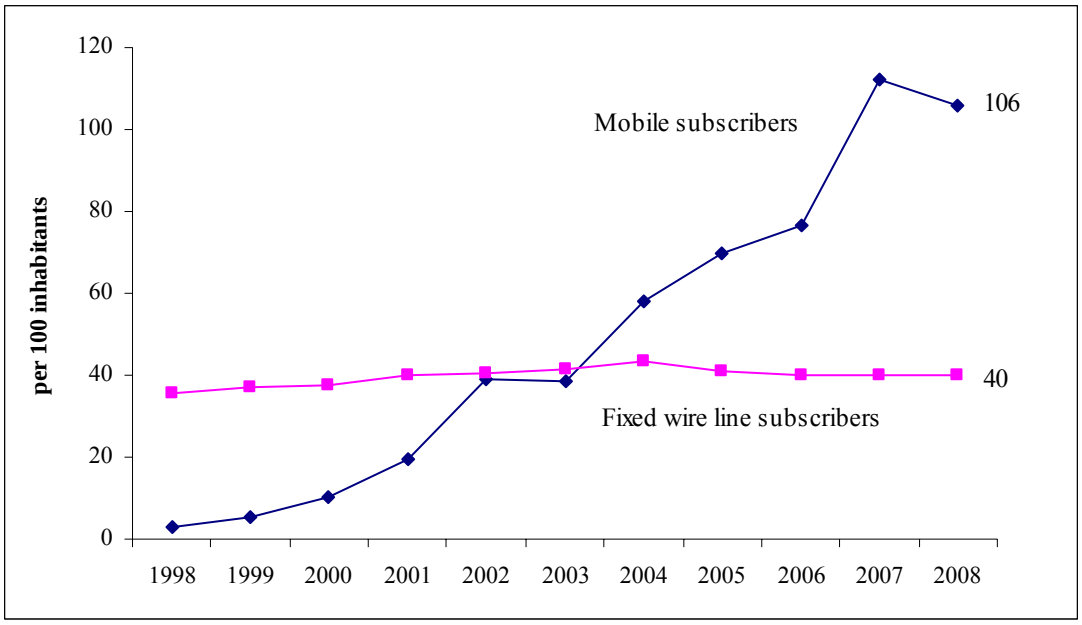
5.3.1 Fixed access and local calling

The chart below shows the pattern in fixed and mobile telephony usage from 2000 to 2008. The fixed penetration rate – the percentage of the population with a subscription to a fixed line telephone – has increased marginally from 38% in 2000 to 40% in 2008[73]. BTC has close to a 100% market share in these fixed connections to the PSTN network; SRG has limited market share for business consumers.

At June 2008, mobile connections represented close to 73% of total telephone connections (compared to 22% in 2000), and BTC's exclusivity means it has 100% market share in mobile services. URCA believes that BTC's introduction of prepaid services and its allocation of greater resources to mobile services are largely responsible for the high rate of growth in mobile subscribership.

[71] Trades as Future Net and Speedway Internet.
[72] Source: Data provided by Pros Wireless to URCA.
[73] It should be noted that a 40% penetration rate does not imply that only 40% of the population have access to a fixed telephone. The penetration rate is calculated on a per capita basis rather than a per household basis. A large number of people live in multi-occupancy households where one subscription serves all household members.

Telephone connections in The Bahamas[74]



5.3.2 Inter-island and other charged calls

URCA does not have detailed data about consumer behaviour as regards this product.

5.3.3 International voice calling

Consumers are understood to consider price as an important factor when making international calls. This is evidenced by the considerable amount of advertising in the country which focuses on the price differences for international calling. Some consumers appear to be willing to use phone cards and VoI rather than the traditional BTC fixed line international calling. BTC's international call prices have fallen in recent years, although URCA believes they remain high compared to jurisdictions where direct voice competition is available[75].

5.3.4 Voice over the internet

URCA does not have detailed usage statistics for VoI. The services are quite heavily advertised in The Bahamas, suggesting that there is a reasonably large market worth contesting. There are approximately 60,000 internet subscribers in The Bahamas[76], who represent the current market for this service. Personal Computer penetration is not known, but was estimated by the World Bank to be 13% (per capita) in 2007[77].

5.3.5 Public payphones

URCA does not have data on the usage of these services.

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[74] Source: ITU, includes residential and business consumers.
[75] Please see the recent retail pricing consultation http://btcprivatisation.com/uploads/Retail%20pricing%20consultation%20REVISED%20090624.pdf
[76] URCA estimate
[77] http://devdata.worldbank.org/ict/bhs_ict.pdf

5.3.6 **Broadband internet access**

Detailed subscriber data is unavailable, although the total number of internet subscribers in The Bahamas is believed to be in the region of 60,000.[78] From a review of CBL's and BTC's financial statements, URCA believes that CBL and BTC have approximately 60-65% and 30-35% market share respectively of the overall internet market (all speeds). Satellite Bahamas and ISPs are thought to have around 5%[79] market share.

5.3.7 **National leased lines**

URCA does not have detailed information on consumer behaviour in national leased lines. Information provided by the operators has allowed URCA to estimate that BTC's market share based on customer numbers is ✂%[80] and its market share based on revenues is ✂%. URCA understands that beyond CBL there are no other significant players in the market and therefore CBL has ✂% and ✂% market share respectively.

5.3.8 **International leased lines**

URCA does not have detailed information on consumer behaviour in international leased lines. Information provided by the operators has allowed URCA to estimate that BTC's market share based on customer numbers is ✂% and its market share based on revenues is ✂%. URCA understands that beyond CBL there are no other significant players in the market and therefore CBL has ✂% market share based on customer numbers and ✂% market share based on revenues respectively.

[78] URCA estimate based on information from operators

[79] URCA estimate

[80] The information available to URCA is a snapshot rather than detailed historical picture and URCA recognises also that some of the data is confidential for commercial reasons. For these reasons the numbers are not presented.

6 Retail products in the high level SMP market

This Section describes the analysis performed on the products identified in Section 5 above, using the Methodology described in Section 4.

The following products are examined in turn:

- Fixed telephony access and local calling
- Domestic Long Distance (DLD) fixed calling[81] and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling[82]
- Voice over Internet
- Public payphones
- Broadband internet access
- National leased lines
- International leased lines

URCA has firstly considered the demand- and supply-side substitutes for these products, in accordance with Step 2 of the Methodology.

Those products for which URCA has identified no effective demand- or supply-side substitutes within the defined period are then subjected to the EU three criteria test, in accordance with Step 2 of the Methodology:

- high and non-transitory entry barriers;
- a market structure which does not tend towards effective competition during the timeframe of this review; and
- the application of competition law alone would not adequately address market failures that may arise.

The application of these tests determines whether to exclude a product from the high level market for which the operator is presumed to have SMP.

6.1 Fixed voice access and local calling

The product has first been tested for substitutability, in accordance with Step 2 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

[81] BTC's DLD calling service is calls made between locations on different islands in The Bahamas.
[82] BTC's ILD calling service is calls made to international locations.

6.1.1 **Demand-side substitution for fixed voice access**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for fixed voice access and local calls by 5-10% for a non-transitory period of time. Would the price increase be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: SRG fixed access, Voice over Internet (BTC, SRG and various international providers), BTC Mobile, Public payphones
- Possible future products: CBL fixed access

SRG fixed access

In response to a 5-10% increase in the price of BTC fixed access, business customers only could switch to an SRG fixed access connection. Residential consumer would not be able to access this service.

Characteristics

SRG's fixed access has most of the characteristics of the BTC fixed access to what URCA considers to be a reasonable degree. It does not allow access to the automated ancillary services, but URCA does not consider this to be a major barrier to switching. Its main shortcomings are the reliance on mains power, the requirement for more sophisticated hardware and specific software such as an IP based telephone and the fact that it is not a residential product, which therefore excludes a significant proportion of potential subscribers.

Price

Based on the information available to URCA, URCA believes that price would not be a significant barrier to switching to the SRG fixed access service.

Coverage

SRG's coverage is considerably more limited than BTC's due to the scope of its existing licence, and therefore this is a significant barrier.

➔URCA believes that SRG's fixed access represents a viable substitute to BTC's fixed access for business customers only in the areas which SRG serves. However, because this is a relatively limited proportion of the potential market for fixed access, URCA believes that this product would not constrain BTC's ability to profitably raise its prices by 5-10% as the majority of the population would not be able to switch to it.

BTC mobile voice

Consumers could, in response to a 5-10% increase in the price of fixed access, switch to using a mobile phone for certain calls, or switch to using only a mobile phone.

Characteristics

Mobile voice telephony allows calling in a similar way to fixed access but with a lower quality of service. A further difference is that the connection is not fixed at a specific location, however this is likely to be seen as a benefit to consumers and therefore not an impediment to substitution.

BTC mobile lacks some of the characteristics of fixed access and calling such as a Bahamian geographic number, free local calls and automatic entry to the directory enquiries database.

Price

For post-paid customers, price is likely to be the most significant barrier to mobile substitution. Monthly rental charges and voice call charges for mobile are considerably higher than for fixed. Fixed line rental for residential customers is $15 which provides unlimited local on-island calls, compared to the cheapest post-paid mobile package of $10 which does not include any free calls, or $19.99 which provides 100 minutes of calls. As BTC has a monopoly on mobile voice, it is likely to maintain relatively high prices for the time period under consideration.

Coverage

BTC Mobile has near complete coverage of The Bahamas.

➔URCA does not believe that BTC mobile telephony is likely to be an effective demand-side substitute for BTC fixed access and local calls. While several characteristics are similar and high penetration rates for mobile suggest that substitution is likely, the high price of mobile compared to fixed for post-paid customers and the lower quality of service accepted by prepaid customers, implies otherwise.

URCA therefore believes it is unlikely that BTC mobile will present an effective substitute for BTC fixed access and local calling. URCA therefore concludes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

VoI access from international VoI providers

It is possible that consumers could, in response to a 5-10% price rise for fixed access, switch to a VoI connection.

Characteristics

A VoI connection has an advantage over fixed access because it is nomadic – i.e. the device used as a phone (laptop or similar) can be taken to different locations where there is internet access and a connection established in these places.

However, VoI does not possess the majority of characteristics that BTC fixed access does (see the table at the end of this Section). Most importantly, the quality of service is significantly lower and VoI requires more sophisticated hardware and specific software than BTC fixed access. It also depends on the consumer having broadband access, which is not currently available for all consumers in The Bahamas.

Furthermore, subscribers are not able to obtain a personal geographic telephone number for the connection and cannot use the connection to contact the Bahamian emergency services.

Price

For consumers who have a computer and broadband connection already, VoI costs less than BTC fixed access and therefore price would not be a barrier to switching to VoI. For consumers without computers and broadband, the cost of obtaining both of these would be a significant barrier to switching.

In fact, VoI is already cheaper than BTC fixed access (before computer and broadband costs), yet no significant proportion of consumers have switched to VoI. This implies that consumers do not see it as a good substitute, and URCA believes that a 5-10% increase in the price of BTC fixed access would not change this.

Coverage

VoI coverage is limited only by the availability of a broadband connection. Broadband is available throughout The Bahamas from Satellite Bahamas, although this service is more expensive than CBL and BTC broadband service. Overall, URCA does not consider coverage to be a significant barrier to switching.

➔URCA believes VoI from international VoI providers is unlikely to present an effective demand-side substitution for BTC fixed voice access and local calling in the time period under review. Although it offers some of the characteristics of fixed access and local calling, it is cheaper only to those users who already have computers and broadband, and does not provide consumers with a Bahamian geographic number or with an equal quality of service. URCA therefore concludes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

VoI access from BTC and SRG

The analysis of the substitutability of BTC and SRG VoI is the same as for the international VoI providers apart from two advantages which BTC and SRG VoI have. Both can be used to contact the Bahamian emergency services and also it is possible to obtain a personal geographic number. VoI services require significantly more technical software than BTC's fixed service, and also suffer from quality of service issues, hence URCA believes it would not be a substitute for the majority of consumers.

➔URCA believes VoI from SRG and BTC is unlikely to present effective demand-side substitution for BTC fixed access and local calling in the time period under review. Although it offers some of the characteristics of fixed access and local calling, it is only cheaper to users who already have computers and broadband, and the quality of service is considerably worse. SRG and BTC VoI have the advantage of allowing calls to the Bahamian emergency services and access to a Bahamian geographic number, but URCA believes that this is outweighed by the quality of service considerations and the need for broadband access. URCA therefore concludes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

BTC and SRG payphones

Consumers could, in response to a 5-10% increase in the price of fixed access, switch to using public payphones.

Characteristics

Public payphones have some of the characteristics of BTC fixed access and calling, but also lack important characteristics. Payphones cannot function effectively as a business product – businesses are likely to require a telephone on the premises – and are inconvenient for residential consumers.

Price

For low usage consumers, price is unlikely to be a significant barrier to switching as the money saved from not paying the access charge could be used to purchase a limited number of calls from a payphone.

Coverage

Payphones are available in most parts of The Bahamas, but are unlikely to be seen as conveniently located for a majority of consumers.

➔URCA believes public payphones are unlikely to present effective demand-side substitution for BTC fixed access and local calling in the time period under review. URCA therefore concludes that competition from pay phones would not constrain BTC's ability to profitably raise its prices by 5-10% as the majority of the population would not be able to switch to it.

CBL fixed voice over cable

Characteristics

URCA does not have complete information on a future CBL fixed voice product. Based on the fact that CBL has a reliable fixed infrastructure used for the provision of internet and TV services, URCA considers it likely that, were CBL to enter this market, CBL's fixed voice would have similar characteristics to BTC's fixed voice.

Price

URCA does not know how these services would be priced.

Coverage

Coverage is likely to be similar to the coverage of CBL's TV and internet coverage. Whilst this covers the majority of The Bahamas, it is not as extensive as BTC's coverage and therefore it is unlikely to serve as a substitute in all areas within the time period.

➔Based on the information available, CBL's fixed voice may eventually present an effective substitute to BTC's fixed access. However, URCA does not believe that this will happen to a sufficient extent in the time period under review, due to the time taken to meet the

regulatory requirements, negotiating and implementing interconnection, establishing a fully operational service and attracting customers. URCA therefore concludes that future CBL voice products would not constrain BTC's ability to profitably raise its prices by 5-10%.

6.1.2 Supply-side substitution for fixed voice access and local calling

URCA has considered whether a 5-10% non-transitory increase in the price of BTC's fixed access and local calling would likely lead to a change in the supply of services, either new suppliers entering the market or a change in the nature of current provision.

URCA believes that new entry to this market beyond that considered above is unlikely. Provision of fixed access requires considerable infrastructure and it takes a long time to construct a network capable of providing fixed voice telephony. There are already two extensive fixed communications infrastructures in The Bahamas capable of delivering fixed voice (BTC and CBL, although CBL is currently prohibited from delivering voice services). URCA therefore believes it to be unlikely that a new entrant would enter the market for fixed access in response to a 5-10% rise in the price of BTC fixed access.

As regards changes in the nature of current provision, URCA also believes that a 5-10% increase in the price of BTC's fixed access and local calling would be unlikely to have an effect. Most operators in this market can be expected to have medium- to long-term business plans because of the nature of the infrastructure investment already discussed. They are unlikely to make significant changes to these in response to a 5-10% price increase for the BTC service.

➔Based on the information available it is unlikely that there will be effective supply-side substitution for the BTC fixed voice access product within the period under review.

6.1.2.1 Conclusion of substitutability test

The SSNIP test found that it is unlikely that there will be effective substitutes for any of BTC's fixed voice access products within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC. Therefore URCA proceeds to apply the EU three criteria test to this product to assess whether the product is susceptible to *ex ante* regulation and therefore belongs in the high level SMP market.

6.1.3 EU three criteria test

6.1.3.1 Barriers to entry

Provision of local access network facilities in electronic communications networks has conventionally been considered by regulators to be an enduring bottleneck. In other words, facility competition is unlikely to occur due to the substantial capital investment required and the fact that the investment would be sunk because it is not possible to relocate the assets physically, nor reallocate the asset to a different use.

In The Bahamas there are two existing local access infrastructures (BTC's and CBL's) but, as discussed above, BTC's access network is currently the only one utilised for fixed voice access. If CBL chose to launch a competing fixed voice access product it would have to comply with certain regulatory requirements first which may mean that it is unable to act as an effective substitute in the time frame considered in this review.

Further, SRG has limited local access infrastructure in the form of fixed wireless access (FWA), but this is not rolled out extensively across The Bahamas and has historically been limited in SRG's licence to New Providence, Grand Bahama and Abaco.

Despite technological developments, enabling the provision of fixed voice access via FWA, which is considered substantially less capital intensive than building cable-based networks, the investment is still considerable. URCA therefore considers that the barriers to entry to the market remain high, absent regulatory intervention.

This means that the product should be passed through to the next stage of the three stage test.

6.1.3.2 **Emergent competition at the retail level**

Although some substitutes for BTC's fixed access and local calling products exists, BTC remains the only significant provider. Some competition exists from SRG and some may arise if CBL is able to enter the market, but URCA does not consider that this, prima facia, would constitute effective competition.

Therefore, given the substantial barriers to entry as discussed above, absent regulatory intervention, URCA does not consider the market as having emergent competition at the retail level in the period covered by this review.

6.1.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether the possibility of *ex post* competition law to tackle abuse of an SMP position would be a sufficient deterrent to address the market failures.

When considering this question, it is important to understand the nature of the market and products in question. Electronic communications services are provided through electronic communications networks, all of which require substantial investment. In general the local access infrastructure is considered the most difficult component for potential competitors to replicate. Therefore, if an SMP provider of services based on the local access infrastructure were to abuse its market power in the provision of these products it could cause long-term damage to the prospect of competitive provision of the products as well as short-term damage to consumers, businesses and the overall Bahamian economy through imposition of anti-competitive trading conditions.

URCA does therefore not consider that *ex-post* competition law measures on their own would be sufficient to address potential problems arising from abuse of market power in this area.

6.1.3.4 **Conclusion of EU three criteria test**

Based on the analysis above, URCA concludes that the provision of fixed access and local calling is a product susceptible to *ex-ante* regulation and belongs in the high level SMP market.

6.1.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

The table below summarises the SSNIP test and EU three criteria test for fixed voice access and local calling.

SSNIP test for fixed voice access and local calling

	Possible Substitutes					
	Fixed wireless	Mobile	Vol	Vol	Payphones	*Cable*
	SRG	**BTC**	**BTC and SRG**	**Various international**	**BTC and SRG**	***CBL***
Characteristics						
High QoS	●●●	●●	●	●	●●●	●●●
Does not rely on mains power in subscriber's premises	?	●●	-	-	?	-
Entry to the telephone directory	●	●	●	-	-	●
Bahamian geographic number	●●●	●●	●●●	-	-	●●●
Includes 'free' local calls	-	-	●	●	-	?
Automated ancillary services	?	●●●	-	-	●●●	?
Residential and business product	●	●●	●●	●	●	?
Simple hardware and software requirements	●●	●●●	-	-	●●●	●●
Calls to emergency numbers	●●●	●●●	●●●	-	●●●	●●●
Price	●●●	●	●●●	●●●	●●	?
Coverage	●	●●●	●●●	●●●	●●	●●
Likely to be an effective substitute within the time period under review?	N	N	N	N	N	N

EU three criteria test results for fixed voice access and local calling

Criteria	**Present?**
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Note for the SSNIP test: When assessing the characteristics, pricing and coverage of the substitutes, BTC's fixed voice access and local calling package have been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on, see the key below). The review of future products makes use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

Key:

●●●	Demonstrates the criteria to the greater or equal degree as BTC
●●	Adequately demonstrates the criteria compared to BTC

●	Poorly demonstrates the criteria compared to BTC
-	Does not demonstrate the characteristic
?	Insufficient information available to URCA
Italics	Used for products not currently available in The Bahamas

6.2 DLD and ILD fixed calling and domestic fixed calls to rated numbers

DLD and ILD fixed calling and domestic fixed calls to rated numbers (for the remainder of this Section, "BTC voice calling services") have been combined and analysed together, as the possible substitutes and characteristics are similar. The products have first been tested for substitutability, in accordance with Step 2 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution.

6.2.1 Demand-side substitution for DLD and ILD fixed calling and domestic fixed calls to rated numbers

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for BTC voice calling services by 5-10% for a non-transitory period of time. Would this price increase be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: SRG fixed wireless voice, SRG re-sale through pre-paid cards, Voice over Internet (BTC, SRG and various international providers), BTC Mobile, Public payphones

- Possible future products: CBL fixed voice over cable.

SRG Fixed wireless voice

Characteristics

SRG's fixed wireless voice services has similar characteristics to BTC voice calling services in most respects. However, the product is only available to businesses, and therefore cannot currently serve as a substitute for the majority of consumers.

Price

SRG's DLD calling prices are slightly lower than BTC's and therefore price would not be a significant barrier to substitution for DLD fixed calling and domestic calls to rated numbers. However, URCA believes that the reductions in BTC's ILD prices are evidence that prices were originally at very high levels, and that these were unsustainable in the face of moderate competition from products that do not in fact possess all the same characteristics as BTC's product. URCA believes that the very large price gap between BTC's ILD and the imperfect alternatives has made consumers willing to accept the alternatives. It is URCA's understanding that if BTC's ILD call prices had been at competitive levels, it would not have lost significant amounts of traffic to alternatives.

Despite the reductions in ILD prices by BTC over the past nine years, they remain high when compared to other countries as demonstrated by the price benchmarking undertaken in the

Retail Pricing Regulation Consultation[83]. URCA believes this is further evidence that ILD fixed calling does not face effective competition.

Coverage

SRG's fixed wireless network has considerably less coverage than BTC's. For this reason, URCA believes that this is unlikely to represent an effective substitute for BTC's voice calling services.

➔ Based on the evidence available, URCA concludes that SRG's fixed wireless voice services are unlikely to be an effective substitute for BTC's voice calling services in the time period under review. URCA therefore concludes that the SRG services would not constrain BTC's ability to profitably raise its prices by 5-10%.

SRG re-sale

Characteristics

SRG's pre-paid phone cards have most of the same characteristics as BTC's voice calling services. However, they cannot provide direct dialing, meaning that the user must use two-stage dialing by entering a PIN code before dialing the number they wish to reach, which could be considered by some consumers as an inconvenience.

Price

The cost of calls made using this service are in general lower than BTC's prices by between 10% and 20%.

Coverage

SRG's pre-paid cards can be used to make calls from most fixed phones, payphones and mobiles in The Bahamas, and they therefore have very high coverage.

➔ Based on the evidence available, despite the service being available via BTC phones, URCA concludes that, primarily due to the two-stage dialing and the need to have a card with credit whenever the user wants to make a call, SRG fixed resale services are unlikely to be an effective substitute for BTC's voice calling services in the time period under review.

BTC mobile voice, VoI (BTC and SRG), VoI (various international providers), Payphones and CBL fixed telephony over cable

The comparison of characteristics, price and coverage is the same for these products as it was for fixed access and local calling, therefore URCA has not repeated the analysis here and Section 6.1.1 should be referenced.

➔ Based on the evidence available, URCA concludes that these services are unlikely to be effective substitutes for BTC's voice calling services in the time period under review. URCA therefore concludes that these products would not constrain BTC's ability to profitably raise its prices by 5-10%.

[83] Issued by the Government of the Commonwealth of The Bahamas, 17th June 2009.

6.2.2 Supply-side substitution for DLD and ILD fixed calling and domestic fixed calls to rated numbers

The supply-side SSNIP test asks what would happen to supply over a 12-24 month period were BTC to increase its prices for voice calling services calling by 5-10% for a non-transitory period of time. Would other suppliers enter the market and provide new substitutes? Would the resulting demand-side substitution mean that the price increase was unprofitable to BTC?

As regards providing these services through a fixed voice access product, the supply-side considerations are the same as they were for fixed voice access and local voice, discussed at Section 6.1.2 above.

As regards providing the service as a re-sale service, a new entrant would have to negotiate interconnection with BTC. SRG is already very active in the provision of these products and a new entrant would probably not be able to offer a service significantly different to SRG's, which URCA does not believe to be an effective substitute.

Launching competing voice services using an indirect access method would require regulatory intervention and this analysis is performed on the assumption of no incremental regulatory intervention over the current level.

➔ URCA concludes that it is unlikely that there would be supply-side substitution for the BTC's voice calling services in the time period under review.

6.2.3 Conclusion of substitutability test

The SSNIP test found that it is unlikely that there will be effective substitutes for BTC's voice calling services within the defined time period that would make a non-transitory 5-10% price rise unprofitable for BTC. Therefore URCA proceeds to apply the EU three criteria test to this product to assess whether the products are susceptible to *ex ante* regulation and therefore belongs in the SMP market.

6.2.4 EU three criteria test

6.2.4.1 Barriers to entry

Provision of this product relies on local access, for which the barriers to entry are discussed in the section on fixed voice access and local calling, concluding that there are substantial barriers to entry.

This means that the product should be passed through to the next stage of the three stage test.

6.2.4.2 Emergent competition at the retail level

Although some potential substitutes for BTC's voice calling services exist, BTC remains the only significant provider. Some competition exists from SRG and some may arise if CBL is able to enter the market, but URCA does not consider that this, *prima facia*, would constitute effective competition.

Therefore, given the substantial barriers to entry as discussed above, absent regulatory intervention, URCA does not consider the market as having emergent competition at the retail level in the period covered by this review.

6.2.4.3 **Sufficiency of *ex post* competition law**

URCA has considered whether the possibility of *ex post* competition law to tackle abuse of an SMP position would be a sufficient deterrent to address the market failures.

The analysis of the sufficiency of *ex post* competition law has been discussed in detail in relation to fixed voice access and local calling. URCA has not repeated the analysis here and the previous section should be referenced.

URCA does not consider that *ex-post* competition law measures on their own would be sufficient to address potential problems arising from abuse of market power in this area.

6.2.4.4 **Conclusion of EU three criteria test**

Based on the analysis above, URCA concludes that the provision of DLD fixed calling, domestic fixed calls to rated numbers, and ILD fixed calling are products susceptible to *ex-ante* regulation.

6.2.5 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

The table below summarises the SSNIP test and EU three criteria test for BTC's voice calling services.

SSNIP test for DLD and ILD fixed calling and domestic fixed calls to rated numbers

	Possible Substitutes						
	Fixed wireless	Re-sale	Mobile	VoI	VoI	Payphones	*Cable*
	SRG	**SRG**	**BTC**	**BTC and SRG**	**Various international**	**BTC and SRG**	***CBL***
Characteristics							
High QoS	●●●	●●●	●●	●	●	●●●	●●●
Direct dialling	●●●	-	●●●	●●●	●●●	●●●	●●●
Residential and business product	●	●●	●●●	●●	●●	●	?
Simple hardware and software requirements	●●	●●●	●●●	-	-	●●●	●●
Price	●●●	●●●	●	●●●	●●●	●●●	?
Coverage	●	●●●	●●●	●●●	●●●	●●	●●
Likely to be an effective substitute within the time period under review?	N	N	N	N	N	N	N

EU three criteria test results for DLD and ILD fixed calling and domestic fixed calls to rated numbers

Criteria	**Present?**
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Key:

Please reference the summary table for fixed voice access and local calling.

Note for the SSNIP test: When assessing the characteristics, pricing and coverage of the substitutes, BTC's DLD and ILD fixed calling and domestic fixed calls have been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of

URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

6.3 Voice over Internet

The product has first been tested for substitutability, in accordance with Step 2 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

6.3.1 **Demand-side substitution for BTC VoI**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for VoI by 5-10% for a non-transitory period of time. Would the price increase be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: SRG fixed wireless voice, SRG re-sale through pre-paid cards, other Voice over Internet (SRG and various international providers), BTC Mobile, Public payphones

- Possible future products: CBL fixed voice over cable

SRG fixed telephony, SRG re-sale, BTC mobile, Public payphones and CBL cable telephony

These have been grouped together because URCA believes that the analysis of their characteristics and price is reasonably similar.

Characteristics

The products demonstrate some of the characteristics of BTC's VoI as shown by the summary table at the end of this Section.

Price

URCA believes that price is the main attraction of the VoI service to consumers, given that it has lower quality of service parameters than most potential substitutes. In response to a 5-10% increase in the price of BTC's VoI product, subscribers could theoretically switch to one of the products listed above. However, the price of BTC's VoI is at a sufficiently low level that URCA does not believe that consumers would switch to a substitute in response to a 5-10% increase in price.

➔URCA believes that price is a significant barrier to substitution for these products and that therefore they are unlikely to present an effective supply-side substitution in the time period under review.

VoI access from international VoI providers

It is possible that consumers could, in response to a 5-10% price rise for VoI access, switch to a VoI connection from one of the international providers.

Characteristics

VoI from international providers has similar characteristics to the BTC ViBe product, except that it does not allocate a Bahamian geographic number to the subscriber. This may not be an absolute barrier to switching for all consumers but could be important to some. Furthermore, subscribers cannot use the connection to contact the Bahamian emergency services. However, VoI subscribers are likely also to have access to another product (such as BTC fixed or mobile) which does allow access to emergency calls and so this may not be a significant barrier to switching.

Price

The BTC VoI service is more costly than the substitute service and consumers of VoI are more likely to be price sensitive; therefore price would not be a barrier to switching as consumers would react to a 5-10% increase in the price of BTC's VoI service by switching to other providers.

Coverage

All VoI coverage is limited by the availability of a broadband connection. Therefore these products have the same coverage potential as each other.

➔Based on the evidence available, URCA believes that it is likely that VoI from international providers will provide effective demand-side substitution over the time period concerned.

VoI access from SRG

Characteristics

The SRG VoI service (Onephone) has the same characteristics as the BTC product. Both can be used to contact the Bahamian emergency services and it is also possible to obtain a Bahamian geographic number.

Price

The BTC VoI service is more expensive than the substitute service; therefore price would not be a barrier to switching.

Coverage

VoI coverage is limited by the availability of a broadband connection. Therefore these products have the same coverage potential as each other.

➔Based on the evidence available, URCA believes that it is likely that VoI from SRG will provide effective demand-side substitution over the time period concerned.

6.3.2 **Supply-side substitution for BTC's VoI**

URCA determined in the previous Section that there is likely to be effective demand-side substitution for BTC's VoI product. In accordance with the Methodology in Section 4, demand-side substitution is the most important to consider because it directly relates to the choice available to consumers. Consequently, having concluded that there is demand-side substitution URCA does not believe that it is necessary to consider supply-side substitution for BTC's VoI product.

6.3.2.1 **Conclusion of substitutability test**

The SSNIP test found that there are likely to be effective substitutes for BTC's VoI product available within the defined time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

6.3.3 **EU three criteria test**

Following the analysis of the retail market conditions carried out above, URCA has concluded that BTC's VoI product should not remain in the high-level SMP market for BTC.

The product is not considered in relation to the EU three criteria test because URCA found that substitutes are likely to exist for this product from SRG and international providers.

The table below summarises the SSNIP test for BTC's VoI.

SSNIP test results for voice over internet

	Possible Substitutes						
	Fixed wireless	Re-sale	Mobile	VoI	VoI	Payphones	*Cable*
	SRG	**SRG**	**BTC**	**SRG**	**Various international**	**BTC and SRG**	***CBL***
Characteristics							
Calls to emergency services	●●●	N/A[84]	●●●	●●●	-	●●●	●●●
Geographic Bahamian number	●●●	-	●●●	●●●	-	-	●●●
Nomadic	-	●●●	●●●	●●●	●●●	-	-
Price	●	●	●	●●●	●●●	●	?
Coverage	●	●●●	●●●	●●●	●●●	●●	●●
Likely to be an effective substitute within the time period under review?	N	N	N	Y	Y	N	N

EU three criteria test results for voice over internet

URCA determined that effective demand-side substitutes exist for this product, therefore the EU three criteria test has not been applied.

Key:

Please reference the summary table for fixed voice access and local calling.

Note for the SSNIP test: When assessing the characteristics, pricing and coverage of the substitutes, BTC's voice over internet product has been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

[84] Not applicable because the pre-paid card relies on use of an access line, which will itself has access to emergency service and therefore there will be no need to use the card.

6.4 Public payphones

The product has first been tested for substitutability, in accordance with Step 2 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

6.4.1 **Demand-side substitution for BTC public payphones**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for public payphones by 5-10% for a non-transitory period of time. Would the price increase be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: SRG and BTC fixed telephony, SRG re-sale through pre-paid cards, BTC Mobile and Voice over Internet (BTC, SRG and various international providers)

- Possible future products: CBL fixed voice over cable

SRG re-sale

Characteristics

SRG re-sale through pre-paid phone cards matches the majority of the characteristics of public payphones. Payphones have two advantages over SRG re-sale: payphones allow direct dialling while phone cards do not, and payphones may provide more guaranteed access for emergency use because they do not require pre-purchase of a card.

Price

SRG phone cards come in small denominations and calls are of a relatively low price, such that URCA does not believe price would be a significant barrier to substitution.

Coverage

SRG phone cards can be used from any fixed line phone in The Bahamas, including payphones, and therefore they have better coverage than public payphones.

➔URCA believes that SRG re-sale phone cards could represent a reasonable substitute for BTC public payphones. For planned calls, SRG re-sale is likely to be an effective substitute because it has the same characteristics. For calls made in an emergency, it may be a less effective substitute because of the need for pre-purchase.

BTC Mobile

Characteristics

It is URCA's view that BTC Mobile matches the characteristics of public payphones to a reasonable degree and therefore may be an effective substitute in some cases.

Price

BTC Mobile calling charges are relatively high, but as payphones are generally used for occasional, low volume calls, the price differences may not be so significant as to prevent substitution. Mobile also requires the use of a handset: The cost of a handset may exclude some users from using a mobile, but it is possible that many consumers would be able to borrow a handset in order to make an occasional call. Therefore BTC Mobile may in many circumstances be an effective substitute for occasional and emergency calls.

Coverage

BTC Mobile has near complete coverage of The Bahamas and therefore the coverage is greater than for public payphones.

➔URCA believes that BTC Mobile is likely to represent a reasonable substitute for BTC public payphones in some cases.

SRG Payphones

Characteristics

URCA understands that SRG payphones have similar characteristics to BTC payphones.

Price and Coverage

URCA does not have reliable information on the price and coverage of SRG payphones. Coverage is thought to be limited to a small number of densely occupied areas and areas where tourists are present.

➔SRG payphones are unlikely to be an effective substitute for BTC payphones in the time period under review because they are understood to have a very limited coverage.

Fixed telephony (SRG, BTC and possible future CBL)

Characteristics

Fixed telephony matches some but not all of the characteristics of public payphones. One potentially important difference is that fixed telephony services require users to subscribe, whereas public payphones are available to all at all times. Subscribers may also be unable to reach their fixed line in an emergency. Given that payphones may be used by the more vulnerable in society and at times of emergency, URCA believes that these differences may mean that fixed telephony is not an effective substitute. However, URCA has also considered that it may be possible for consumers to use fixed line telephones belonging to other subscribers for occasional or emergency use.

Price

Fixed telephony requires payment of a monthly subscription, and although this is often a relatively low charge, it may make fixed telephony more expensive for very low usage consumers. Calling charges are comparable.

Coverage

Fixed telephony has high coverage and therefore coverage is unlikely to be a major barrier to substitution.

➔URCA believes that BTC fixed telephony is unlikely to constitute an effective substitute for payphones by itself, but that it may be a substitute in some scenarios.

Voice over Internet (various providers)

Characteristics

Voice of Internet lacks several of the characteristics of public payphones, particularly that it has low QoS and is likely to be unavailable in an emergency. It also requires an internet connection, unlike public payphones.

Price

Voice over Internet requires payment of a monthly subscription, and although this is often a low charge, it may make voice over internet more expensive for very low usage consumers, especially as an internet connection is also required. URCA believes that calling charges for VoI are in general lower than for payphones.

Coverage

VoI has high coverage and therefore coverage is unlikely to be a major barrier to substitution. However, there are also some islands without ADSL coverage, where VoI might not be a possible substitute for payphones.

➔ URCA does not believe that VoI is likely to be an effective substitute for BTC public payphones.

6.4.2 **Supply-side substitution for BTC's public payphones**

URCA is not aware of any other providers who would be interested in offering a public payphone service which would compete with BTC's. URCA believes that due to the low commercial attractiveness of public payphone provision on a national basis, competitive provision is likely to be limited to specific places in The Bahamas such as the international airports, cruise ship ports and hotels. URCA does not believe that a hypothetical 5-10% increase in the price of public payphone calls would change this situation.

6.4.3 **Conclusion of substitutability test**

The SSNIP test found that there are some demand-side substitutes for BTC's public payphones available within the defined time period. URCA has considered the nature of demand for payphones. URCA believes that payphones are most often used for occasional, unplanned and emergency phone calls, and often by those members of society with limited means and without easy access to other forms of telephony. URCA has concluded that the range of substitutes available in the time period under review covers, in sum, the range of the demand scenarios described above. That is to say that for a significant majority of possible uses of a payphone, there will be an acceptable alternative amongst the possible substitutes.

Therefore URCA concludes that it is likely there will be effective substitutes for payphones in the time period under review that would make a non-transitory 5-10% price rise unprofitable for BTC.

The additional social function of payphone in providing a medium for calls to emergency services is not addressed in the SSNIP test analysis - as this is not a commercial issue it is addressed separately under the universal service policy.

Therefore, the URCA concludes that there is no need to regulate the commercial aspects of BTC's payphone provision, over and above any obligations under USO.

	Possible Substitutes						
	Fixed telephony	Re-sale	Payhones	Mobile	Vol	Vol	*Cable*
	SRG and BTC	**SRG**	**SRG**	**BTC**	**BTC and SRG**	**Various international**	***CBL***
Characteristics							
High QoS	●●●	●●●	●●●	●●	●	●	●●●
Guaranteed access to emergency numbers	●●	●●	●●●	●●	●	●	●●
Direct dialling	●●●	-	●●●	●●●	●●●	●●●	●●●
No subscription required		●●●	●●●	●●●	-	●	
Price	●●●	●●●	?	●●	●●●	●●●	?
Coverage	●●●	●●●	●	●●●	●●●	●●●	●●●
Effective substitute?	Y/N	Y/N	N	Y/N	N	N	N

EU three criteria test results for public payphones

URCA determined that effective demand-side substitutes exist for this product. Therefore the EU three criteria test has not been applied.

Key:

Please reference the summary table for fixed voice access and local calling.

Note for the SSNIP test: When assessing the characteristics, pricing and coverage of the substitutes, BTC's public payphone product has been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

6.5 Broadband internet access

The product has first been tested for substitutability, in accordance with Step 2 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

6.5.1 **Demand-side substitution for broadband access**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for broadband internet access by 5-10% for a non-transitory period of time. Would the price increase be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: CBL Broadband, Satellite Bahamas broadband, broadband from ISPs.

CBL broadband

Characteristics

CBL's broadband is comparable to BTC's broadband and in fact offers the same and greater download speeds.

Price

In general, BTC's prices are higher than CBL's. However, the tying of Pay TV and internet complicates the comparison of CBL's prices to those of BTC's. For consumers who are already purchasing Pay TV from CBL, the additional price of broadband is considerably lower than BTC's broadband prices. However, it is possible that some consumers buy the cheapest Pay TV package from CBL *in order* to buy CBL's internet, and do not significantly consume the TV services. For these consumers, the $30 monthly price for Pay TV should be added to the stated price for CBL broadband. The $11 per month package, for instance, would then cost $41 per month. The addition of $30 to each of CBL's prices brings them closer to the prices charged by BTC. However CBL is still cheaper for similar speeds.

Coverage

BTC's coverage is more extensive than CBL's and therefore CBL cannot be considered as a substitute in all areas.

➔Based on the evidence available, URCA believes that CBL's broadband represents an effective substitute for BTC's broadband *where it is available*. This conclusion is limited to those areas where CBL provides broadband.

Satellite Bahamas broadband

Characteristics

Satellite Bahamas offers download speeds which are higher than BTC's, with a maximum download speed of 6Mbps compared to a BTC maximum of 1.5Mbps. The quality of service may be slightly worse because of weather interruptions but URCA is not aware of there being a significant difference.

Price

Satellite Bahamas' internet access costs considerably more than BTC's, starting at $80 per month. A 5-10% increase in the BTC price would therefore not make it more costly than Satellite Bahamas, and in fact it would remain considerably cheaper. This is before the installation costs of $275 for the purchase of a dish and receiver card, which are also high.

Coverage

Satellite Bahamas' coverage is comparable to that of BTC.

➔It is URCA's view therefore that the high price of Satellite Bahamas' broadband access products means that they are not an effective substitute for BTC's products.

Broadband from various ISPs

Characteristics

Some ISPs offer broadband with some of the characteristics of the BTC service, particularly in relation to the download and upload speeds available. They also demonstrate the characteristics of 'always on' and the ability to use the line for more than one service at a time.

Price

ISPs do not offer prices which are significantly lower than BTC's as demonstrated by the selected ISPs discussed in Section 5 above.

Coverage

The ISPs have less coverage than BTC, which limits their ability to provide overall effective substitution for BTC's broadband. For example, one of the ISPs, Pro's Wireless, only caters to customers in New Providence. URCA believes that many of the ISPs have a similar marketing strategy and solely target customers on the more populated islands thus reducing their ability to be considered as an effective substitute.

➔While ISPs provide a service which is comparable in some respect to BTC's, they do not offer the same level of coverage. For these reasons URCA believes that a large number of consumers are likely to pay a 5-10% higher price rather than switch to broadband from an ISP. It is URCA's considered view that internet access from ISPs is not a sufficiently effective substitute for BTC's broadband access to constrain BTC's ability to raise prices profitably by a small amount.

6.5.2 **Supply-side substitution for broadband internet access**

The supply-side SSNIP test asks what would happen to supply over a 12-24 month period were BTC to increase its prices for broadband internet access by 5-10% for a non-transitory period of time. Would other suppliers enter the market and provide new substitutes, or would existing suppliers change the nature of their offerings? Would the resulting demand-side substitution mean that the price increase was unprofitable to BTC?

The infrastructure investment required to provide broadband internet is very large. It is unlikely a new entrant would decide to build alternative infrastructure in response to a small BTC price increase when there are already two developed infrastructures.

It is possible that CBL could expand the reach of its services to cover more areas in response to a BTC 5-10% price increase. URCA considers this to be unlikely, as CBL is already cheaper than BTC for these services and has decided not to expand its reach so far. It is unlikely that a 5-10% increase in BTC's prices would change this situation.

➔Based on the information available it is unlikely that there will be effective supply-side substitution for BTC's broadband internet access product in the areas beyond CBL's reach within the period under review.

6.5.2.1 **Conclusion of substitutability test**

The SSNIP test found that it is unlikely that there will be effective substitutes for BTC's broadband internet access product *in areas beyond the reach of the CBL network* within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC. Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to *ex ante* regulation and therefore belongs in the SMP market.

6.5.3 **EU three criteria test**

6.5.3.1 **Barriers to entry**

It would be difficult for a new entrant to The Bahamas to replicate BTC's network. The cost of building a new fixed infrastructure is very high and it would take a considerable amount of time to do this. All alternative platforms such as satellite, 3G and WiMax are also costly, although lower in cost than a fixed network, and difficult to construct. All require significant investment and mobile platforms require access to spectrum that is difficult to obtain and would take time to roll out. The geographic areas in question (those not covered by CBL's network) are the more remote and least heavily populated islands in The Bahamas and therefore the barriers to entry are even higher, the cost per possible subscriber will be higher and therefore the investment is less likely to be profitable.

URCA's view is that there are high barriers to entry from new entrants and that the product should be passed through to the next stage of the three stage test.

6.5.3.2 **Emergent competition at the retail level**

As set out in Section 5, above, there is some existing competition for this product already. However, BTC does not face effective competition in the areas beyond the reach of CBL's network. URCA does not believe that the competitive situation is likely to change in these areas without regulatory intervention and has therefore concluded that there is no emergent competition.

6.5.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether the possibility of *ex post* competition law to tackle abuse of an SMP position would be a sufficient deterrent to address the market failures.

When considering this question, it is important to understand the nature of the market and products in question. Electronic Communications services are provided through electronic communications networks, all of which require substantial investment. Therefore, if an SMP

provider of services based on fixed infrastructure were to abuse its market power in the provision of these products it could cause long-term damage to the prospect of competitive provision of the products as well as short-term damage to consumers, businesses and the overall Bahamian economy through the imposition of anti-competitive trading conditions.

URCA does therefore not consider that *ex post* competition law measures on their own would be sufficient to address potential problems arising from an abuse of market power in this area.

6.5.3.4 **Conclusion of EU three criteria test**

None of the three criteria were met for BTC's broadband internet access product in the areas beyond the reach of CBL's network. Therefore the conclusion of the EU three criteria test is that this product is susceptible to *ex ante* regulation and belongs in the relevant market.

6.5.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product and CBL does not have facilities to provide the product.

The table below summarises the SSNIP test and EU three criteria test for Broadband internet access.

SSNIP test results for broadband internet access

	Possible Substitutes		
	CBL Cable	**Satellite Bahamas** Satellite	**Various ISPs** Various
Characteristics			
Always on	●●●	●●●	●●●
More than one service possible on one line	●●●	●●●	●●●
Price	●●●	●	●●●
Coverage	●●	●●●	●
Likely to be an effective substitute within the time period under review?	N	N	N

EU three criteria test for broadband internet access

Criteria	**Present?**
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Key:

Please reference the summary table for fixed voice access and local calling.

Note for the SSNIP test: When assessing the characteristics, pricing and coverage of the substitutes, BTC's broadband internet product has been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

6.6 National and International leased lines

The products have first been tested for substitutability, in accordance with Step 2 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution.

6.6.1 **Demand-side substitution for national leased lines**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for leased lines by 5-10% for a non-transitory period of time. Would the price increase be profitable to BTC or not?

URCA has considered possible demand-side substitution from CBL data circuits.

CBL Data circuits

Characteristics

CBL's products appear to have the same characteristics as BTC's (see the table at the end of this Section). They therefore appear to be a good substitute in this respect.

Price

URCA does not have detailed price data for these services and therefore cannot fully compare BTC's prices to those of CBL.[85]

Coverage

CBL's services have less coverage than BTC's; therefore it is unable to act as a substitute in some areas.

➔The SSNIP test found that CBL is the only possible demand-side substitute for BTC's leased lines, and it would appear to be a reasonable substitute in terms of characteristics. However, CBL does not cover all the same areas as BTC. Therefore URCA concludes that it is not an effective demand side substitution *in the areas not covered by CBL*.

Although CBL is a substitute in areas where it has network, URCA has concerns as to whether it will provide long term effective competition to BTC given that BTC and CBL are the only two operators with extensive networks and vertically integrated network and service provision. These concerns arise from evidence from other markets where the existence of a vertically integrated duopoly does not result in price levels achieved in countries with more than two providers.

[85] This is a common problem faced by regulators when conducting market reviews of leased line markets, because it is rare for leased line prices to be published by operators. Most contracts are tailored to the customer's needs, to reflect distance between locations and scope of services to be provided. Regulators often rely on comparison of characteristics in these circumstances.

6.6.2 Supply-side substitution for national and international leased lines

The supply-side SSNIP test asks what would happen to supply over a 12-24 month period were BTC to increase its prices for national leased lines by 5-10% for a non-transitory period of time. Would other suppliers enter the market and provide new substitutes, or would existing suppliers change the nature of their offerings? Would the resulting demand-side substitution mean that the price increase was unprofitable to BTC?

Barriers to entry in this market are high because of the need for extensive and costly infrastructure. URCA therefore believes it is unlikely that other suppliers would enter the market in response to a 5-10% price increase.

For the same reasons URCA considers it unlikely that CBL would expand its service to the other islands already covered by BTC.

➔ Based on the evidence available, URCA does not feel confident that there will be supply-side substitution for BTC's leased lines in the time period under review.

6.6.2.1 Conclusion of substitutability test

Although CBL is a substitute in areas where it has network, URCA has concerns over whether it will provide long term effective competition to BTC given that BTC and CBL are the only two operators with extensive networks and vertically integrated network and service provision.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to *ex ante* regulation and therefore belongs in the SMP market.

6.6.3 EU three criteria test

6.6.3.1 Barriers to entry

In the timescale considered in this review, URCA believes that it is very unlikely that further operators would roll-out the physical networks required to provide this service in order to compete with BTC. Roll-out of a third network would represent considerable investment both in terms of cost and time. The barriers to entry to this product are considered very high.

6.6.3.2 Emergent competition at the retail level

URCA has no evidence of emergent competition in this area.

6.6.3.3 Sufficiency of *ex post* competition law

For the reasons discussed elsewhere in this paper when discussing the sufficiency of *ex post* competition law in areas requiring access to substantial infrastructure, *ex post* intervention is unlikely to be sufficient.

6.6.3.4 Conclusion of EU three criteria test

URCA concludes that BTC's provision of national and international leased lines in areas where CBL does not have network should be retained within the high-level SMP market for BTC, and further, due to medium-term concerns relating to the vertically integrated duopoly structure of the leased lines market in The Bahamas, URCA intends to retain leased lines for the areas in which CBL has network within the scope of the high-level SMP market for BTC. This results in leased lines throughout The Bahamas being retained within the scope of the high-level SMP market for BTC.

6.6.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product and CBL does not have facilities to provide the product.

The table below summarises the SSNIP test and EU three criteria test for national and international leased lines.

SSNIP test results for national and international leased lines

	Possible Substitutes
	Fixed network
	CBL
Characteristics	
More than one service possible on one line	●●●
Dedicated, end-to-end capacity	●●●
Symmetric bi-directional bandwidth	●●●
Speeds of 1.5Mbps - 155Mbps	●●●
Price	?
Coverage	●●
Likely to be an effective substitute within the time period under review?	N

EU three criteria test for national and international leased lines

Criteria	**Present?**
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Key:

Please reference the summary table for fixed voice access and local calling

Note for the SSNIP test: When assessing the characteristics, pricing and coverage of the substitutes, BTC's national and international leased line products have been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

6.7 Conclusion on retail products in the SMP market

Following the analysis of the demand- and supply-side substitutability of the retail products and EU three criteria tests applied above, URCA has concluded that the following products are part of the relevant market for fixed voice and data services in which BTC has SMP:

- Fixed telephony access and local calling throughout The Bahamas,

- Domestic Long Distance (DLD) and International Long Distance (ILD) fixed calling and domestic fixed calls to rated numbers throughout The Bahamas,

- Broadband internet access outside the areas where CBL does not provide broadband, which are Andros, Berry Islands, Bimini, Cat Island, Crooked Island, Exuma, Inagua, Long Island, Rum Cay, Ragged Island and San Salvador,

- National and international leased lines.

The Voice over internet products are not considered further in this document because URCA found that substitutes are likely to exist for them from SRG and international providers.

7 Description of wholesale products

The products covered in this Section would enable a competing provider to purchase services from BTC to replicate BTC's retail services in this high level market. Other wholesale products could be considered[86] but for the purpose of the SMP presumptions and the safeguard SMP obligations, URCA has limited the scope of wholesale products discussed at this stage.

The previous analysis has determined the retail products which belong in the fixed voice and data market in which BTC has presumed SMP.

This Section identifies the underlying wholesale products and interfaces which enable BTC to offer the retail products included in the high level SMP market. Although at present the majority of wholesale products in the fixed voice and data market are not readily available in The Bahamas, BTC in effect provides these products informally to its own retail business and therefore it can be considered as currently having 100% market share in the provision of each of these products.

The characteristics, pricing and other relevant parameters of BTC's wholesale products are discussed below. The Sections following that description discuss any existing and potential substitutes for these products.

[86] Other wholesale products are listed in the recent consultation on Access and Interconnection and may be included in future analysis and determinations by URCA.

7.1 Products in the high level SMP market

The underlying wholesale products for the retail products included in the SMP market are set out below:

	Retail Products					
Wholesale Products	Fixed access & local calls	Domestic long distance calls	International long distance calls	Broadband	National leased lines	International leased lines
National call transit	**x**	**x**	**x**			
International call transit			**x**			
Call termination	**x**	**x**				
Backhaul (national)	**x**	**x**	**x**	**x**		
Backhaul (international)			**x**	**x**		
Wholesale leased lines (national)				**x**	**x**	**x**
Wholesale leased lines (international)						**x**
Bitstream Access	**x**	**x**	**x**	**x**		
Termination of calls to directory enquiries	**x**					
Termination of emergency calls to the police	**x**					
Termination of automated ancillary services	**x**					
Termination of calls to operator assistance facilities	**x**	**x**	**x**			
Origination of calls to freephone numbers		**x**				
Termination of calls to freephone numbers		**x**				
Subscriber entry to the directory enquiries database	**x**					

The wholesale products are described in more detail below[87].

Overview of BTC's network

BTC operates a three-tier network, similar to that of CBL, separated into the local access network, the domestic backbone and the international backbone.

BTC's local access network is constructed primarily from twisted copper pairs. It was originally designed to carry voice services only but in recent years ADSL[88] technology has been developed which enables broadband provision using the higher frequency bandwidth on the copper pairs, reserving the lower frequency for the voice services. BTC currently offers up to 2Mbps speed Internet access on its twisted copper pair local access network.

[87] Many of the wholesale products are also explained in the Access and Interconnection consultation paper issued earlier this year as well as in the Draft Access & Interconnection Guidelines ECS 22/2009

[88] Asynchronous Digital Subscriber Line

URCA understands that BTC is rolling out Fiber to the Curb (FTTC)[89] as part of its NGN upgrade, which would mean that it could deploy VDSL[90] on the twisted copper pairs running from the street cabinet to the customer's premises. VDSL could substantially increase the internet access speeds that BTC could offer. URCA has no details of the progress of this project but does not expect that it will have substantial impact on BTC's retail service portfolio over the coming 12-24 months[91].

Prices

BTC has an Interconnection Agreement in which it offers some of the products listed below. The prices are confidential and are not disclosed in this document.

Coverage

BTC's local and domestic backbone networks cover the vast majority of the inhabited islands in The Bahamas. The fixed access network reaches 99% of inhabitants and the remainder is covered with fixed wireless[92].

BTC's ADSL services are available in Abaco, Acklins, Andros, Berry Islands, Bimini, Cat Island, Crooked Island, Eleuthera, Exuma, Grand Bahama, Harbour Island, Inagua, Long Island, Mayaguana, New Providence, Ragged Island, San Salvador and Spanish Wells.

7.1.1 National call transit

Call transit is where a call is handed over from an operator's network, via a Point of Interconnection, to BTC's network, initially switched by BTC's switch and subsequently handed to either a third party or back to the carrier that originated the call.

7.1.2 International call transit

International Call Transit is where a call is handed over from an operator's system, via a Point of Interconnection[93], to BTC, initially switched by BTC's switch and subsequently handed to a third party operator outside The Bahamas to which BTC's network is directly connected.

7.1.3 Call termination

This is the completion of calls that originate on the interconnection seeker's network and are destined for end-users connected to BTC's network.

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[89] Fibre to the Curb (FTTC), is a telecommunications system based on fibre-optic cables run to a platform that serves several customers. Each of these customers has a connection to this platform via coaxial cable or twisted pair.

[90] Very High Bitrate Digital Subscriber Line

[91] BTC indicates a date of 2011 in its response to the Access and Interconnection consultation.

[92] Source: BTC data provided to URCA

[93] A Point of Interconnection (POI) is the boundary between the interconnected networks, located somewhere on the interconnection provider's network. A POI may be located at the premises of the interconnection provider (co-location), within the premises of the interconnection seeker (customer sited interconnect), or at a point in between the interconnection provider's and interconnection seeker's respective premises (in-span interconnect).

7.1.4 **Backhaul (national)**

Backhaul is the transmission facilities in BTC's network between the core, or backbone, of the network and the access network at the "edge" of the hierarchical network. A backhaul product would mean that BTC provides another operator with capacity between a point in the other operator's network to a point either on the other operator's network or to a point on BTC's or a third party's network. Backhaul differs from leased lines in that leased lines connect to locations outside the providers' networks – e.g. typically to one or two customer locations.

7.1.5 **Backhaul (international)**

This product is the international transmission facilities connecting BTC's national backbone network to international destinations.

7.1.6 **Wholesale leased lines (national)**

This product is wholesale access to national (within The Bahamas) links offering high-quality symmetric and dedicated transmission capacity (from 64kbit/s to 155 Mbit/s) between two or more specific locations. It is effectively a wholesale version of BTC's existing retail product of national data circuits. Wholesale leased lines differ from backhaul services in that backhaul is used for the provider's network business whereas leased lines provide connection to, or between, end customers. BTC may lease capacity to another operator to enable provision of dedicated connectivity.

National wholesale leased lines would allow other providers to rent lines from BTC and then offer these to retail customers.

7.1.7 **Wholesale leased lines (international)**

This product is wholesale access to international links offering high-quality symmetric and dedicated transmission capacity (from 64kbps to 155 Mbps) between two or more specific locations. It is effectively a wholesale version of BTC's existing retail product of international leased lines. Wholesale leased lines differ from backhaul services in that backhaul is used for the provider's network business whereas leased lines provide connection to, or between, end customers. BTC may lease capacity to another operator to enable provision of dedicated connectivity.

International wholesale leased lines would allow other providers to rent lines from BTC and then provide these at the wholesale level to retail customers.

7.1.8 **Bitstream access**

Bitstream access refers to a high speed data interface within the local access network that allows BTC to distribute voice and data services over the network to the end user[94]. If BTC provided bitstream access as a wholesale product to a third party it would allow for some opportunity for the operator to differentiate its service in quality terms and, to some extent, the range of services offered. It does not entail third party access to the physical cable in the network and BTC would retain control of the technical characteristics of the service (such as maximum downstream and upstream speeds, standards used, etc.).

[94] ETP Recommendations on High Speed Bitstream Services in the Local Loop, June 2001, ETP

7.1.9 Termination of calls to directory enquires

This is the termination of calls to the BTC's directory enquiries service and the associated use of that service. Wholesale access to this service would allow alternative providers to provide retail customers with access to the service.

BTC already provides call termination, termination of emergency calls to the police and termination of calls to toll-free/freephone numbers. These products are offered by BTC in its current interconnection contract with SRG It does not currently provide termination of calls to automated ancillary services, operator assistance services or operator assistance facilities.

7.1.10 Termination of emergency calls to the police

This is the termination of emergency calls to the police, which is currently controlled by BTC. This would allow alternative providers to provide retail customers with access to the service.

7.1.11 Termination of calls to automated ancillary services

This is the termination of calls to the automated ancillary services which BTC currently provides. This would allow alternative providers to provide retail customers with access to the service.

7.1.12 Termination of calls to operator assistance

This is the termination of calls to the BTC's operator assistance service and the associated use of that service. Wholesale access to this service would allow alternative providers to provide retail customers with access to the service.

7.1.13 Origination of calls to toll-free/freephone numbers

This is the origination of calls to toll-free/freephone numbers. The charging is unusual for these numbers, because the receiving party pays and the call is free to the calling party.

In the interests of light touch regulation, URCA will not be looking to regulate this service at this stage of development in the communications market. The product will not be considered further in this review.

7.1.14 Subscriber entry to the directory enquiries database

This product would allow providers to have the telephone numbers of their customers entered into BTC's directory enquiries database. BTC currently charges $3 monthly for inclusion in the directory enquiries database for consumers who subscribe to an alternative fixed voice service.

In the interests of light touch regulation, URCA will not be looking to regulate this service at this stage of development in the communications market. The product will not be considered further in this review.

7.2 Possible substitutes

There is currently no wholesale market for majority of the possible fixed voice and data products in The Bahamas. Consequently this review of substitutes only looks at hypothetical products.

This Section outlines the products which could be possible substitutes for BTC's wholesale products. It covers those products which:

- Are currently available; and

- Could become available within the time period under review.

Future products, including new products and expansions or improvements in current products, have only been considered when URCA believes that there is a reasonably high probability of their being available in the 12-24 month period under review.

The products are organised by provider:

- CBL

- SRG

- Other future providers.

7.2.1 **CBL**

7.2.1.1 **Current CBL products**

URCA believes that CBL's products could be considered as potential substitutes for all of BTC's wholesale products.

CBL has a high capacity fibre network in The Bahamas which it currently uses to provide Pay TV services.

CBL's local access network is constructed from coaxial cable, which can be used for a range of services and which can offer very high bandwidths[95].

CBL operates a domestic fibre-optic transmission network which connects its local access nodes with its cable TV Head-end location[96]. This network is referred to in this paper as CBL's national backbone.

CBL's national backbone has the following characteristics:

- High capacity fibre network connecting CBL's local access network nodes with CBL's head-ends for the transmission of content, either intra-island or inter-island,

- Capacity and technically suitable for double and triple play provision[97].

To connect internationally, CBL uses the fiber-optic network operated by its subsidiary Caribbean Crossings Ltd. (CCL). The CCL fiber-optic network connects CBL's domestic backbone to the USA. This international fibre-optic backbone has the following characteristics:

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[95] CBL's coaxial cable access network is designed using an 'N + 3' node architecture, and passes an average of 200 homes per node. Each node connects to the central Head End location through three optical fibres.

[96] CBL has twelve head-ends in total situated on various islands across The Bahamas: eight are analogue and four are digital.

[97] Double and triple-play refer to the provision of more than one type of service – presently CBL offers Pay TV and internet access (double-play); if it were to offer fixed voice services then it would be triple-play.

- It is a high capacity fibre network connecting CBL's national network to Florida,
- Satellite dish farms allowing for the transmission of content to CBL from satellite sources,
- Capacity and technically suitable for double and triple play provision.[98]

Price

URCA is not aware of any published wholesale products and prices offered by CBL[99].

Coverage

CBL has both an analog and a digital transmission network. The analog local access network is available on the following islands: Abaco, Andros, Berry Islands, Bimini, Eleuthera, Exuma, Grand Bahama, Inagua, Long Island, New Providence and San Salvador[100].

The digital local access network is available on the following islands: Abaco, Eleuthera, Grand Bahama, and New Providence[101].

CBL's national and international backbones have coverage on the following islands: Abaco, Eleuthera, Grand Bahama, and New Providence.[102]

7.2.2 **SRG**

7.2.2.1 **Current SRG products**

SRG currently operates a fixed wireless network offering voice and data services to selected parts of The Bahamas. SRG has access to 2.5GHz spectrum. SRG has until now focused its marketing and network roll-out on serving business customers rather than residential customers. URCA does not have detailed information about SRG's network, although the reach of SRG's infrastructure is understood to be New Providence and Freeport.

SRG does not publish a directory of telephone numbers, but does have a search facility on its website which allows people to search for SRG subscriber numbers. It does not include BTC numbers however. SRG does not have equivalents for the various automated ancillary services which BTC provides although it does interconnect with BTC in order for BTC to terminate emergency calls to the police.

Given the limited reach of its network and the fact that SRG has to purchase wholesale access to various transmission services in order to offer its current retail services, URCA has taken the view that it is not a viable wholesale substitute for BTC and that this situation is

[98] Double and triple-play refer to the provision of more than one type of service – presently CBL offers Pay TV and internet access (double-play); if it were to offer fixed voice services then it would be triple-play.
[99] URCA is aware that some commercially negotiated wholesale contracts may exist.
[100] Source: CBL's website
[101] Source: CBL's website
[102] Source: response by CBL to a data request from URCA

unlikely to change in the time period under review. SRG is therefore not included in the substitution analysis.

7.2.3 **Other future providers**

URCA has considered the possibility of a new provider entering the market and rolling out its own infrastructure to provide fixed voice and data services. URCA considers this unlikely give the small overall market size in The Bahamas. It is helpful to compare The Bahamas to similar jurisdictions. For example, in the Netherlands (where there are already two infrastructures) no other operators have invested in a further third network, despite there being no regulatory barriers to doing so. Therefore, URCA has not considered further the possibility of new infrastructure providers within the following substitution analysis.

8 Wholesale products in the high-level SMP market

This Section describes the analysis performed on BTC's wholesale products and the potential substitutes that were described in Section 7, using the Methodology described in Section 4.

The following BTC products will be considered:

- Call transit (national and international)
- Call termination[103] (national and international)
- Wholesale national backhaul
- Wholesale international backhaul
- National leased lines
- International leased lines
- Bitstream access
- Termination of calls to directory enquiries
- Termination of calls to automated ancillary services
- Termination of calls to Operator Services

In the following sub-sections URCA whether CBL could provide demand- and supply-side substitutes for these following products.

8.1 Call transit (national and international)

The product has first been tested for substitutability, in accordance with Step 3 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

8.1.1 **Demand-side substitution for call transit**

Here URCA has considered whether users of a BTC wholesale call transit service would switch to alternative providers if BTC were to increase the price of the service by 5-10% for a non-transitory period of time, to the extent that the price increase would be unprofitable to BTC.

The only potentially viable alternative provider of this service identified by URCA is CBL. CBL's network could allow it to provide some call transit services once it has complied with its regulatory obligations. However, URCA has concerns over whether it will provide long term effective competition to BTC given that BTC and CBL are the only two operators with

[103] This includes call termination, termination of emergency calls to the police, termination of automated ancillary services, termination of calls to freephone numbers, termination of calls to operator assistance facilities and termination of calls to directory enquiries.

extensive networks and vertically integrated network and service provision. These concerns arise from evidence from other markets where the existence of a vertically integrated duopoly do not result in price levels achieved in countries with more that two providers. Consequently, URCA does not believe that CBL would be an effective substitute in the 12-24 month time period considered in this review.

➔ URCA therefore considers that if BTC were to increase its wholesale call transit price by 5-10% for a non-transitory period of time, a hypothetical operator purchasing access from BTC would be unable to switch away from BTC to another provider of access network in the 12-24 month timescale. Therefore, URCA has not identified any demand-side substitutes for the product.

8.1.2 Supply side substitution for call transit

URCA considers whether, if BTC were providing wholesale call transit and raised its price by 5-10%, other suppliers would switch to provision of a substitutable product.

CBL is the only potentially viable alternative provider in the time period under review. URCA has already concluded that it believes CBL is unlikely to launch this service on its own initiative, and does not believe that a 5-10% increase in the price of call transit would be likely to alter CBL's business case for launching this service.

➔ URCA therefore considers that if BTC were to increase its hypothetical call transit price by 5-10% for a non-transitory period of time, no other operator would switch to provision of this service in the 12-24 month timeframe. Therefore, URCA has not identified any likely supply-side substitutes for BTC's call transit within the 12-24 months period of this review.

8.1.2.1 Conclusion of substitutability test

The SSNIP test found that it is unlikely that there will be effective within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to *ex ante* regulation and therefore belongs in the SMP market.

8.1.3 EU three criteria test

8.1.3.1 Barriers to entry

It would be very costly and a long term project for a new entrant to replicate the BTC infrastructure used for the provision of this service. Therefore the barriers to entry for this service are very high.

8.1.3.2 Emergent competition

Given the competitive situation as described above, there is unlikely to be another provider of call transit within this time horizon, therefore this product does not tend towards competition.

8.1.3.3 Sufficiency of *ex post* competition law

URCA has considered whether *ex post* competition law would be sufficient to address market failures in future provision of this wholesale service. In the 12-24 month time frame of this review this service is likely to be important to potential competitors of BTC and would need to be available for a new provider to launch voice services in The Bahamas. Therefore URCA considers it would be unsuitable to rely on *ex post* powers only.

8.1.3.4 **Conclusion on EU three criteria test**

URCA concludes that the call transit product remains within the scope of the high-level SMP market for BTC.

8.1.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

8.2 Termination services

The following products are grouped for simplicity in the following analysis:

- Geographic call termination
- Termination of emergency calls to the police
- Termination of automated ancillary services
- Termination of calls to toll-free/freephone numbers
- Termination of calls to operator assistance facilities
- Termination of calls to directory enquiries

These products can be grouped because the arguments are the same for all.

These products have first been tested for substitutability, in accordance with Step 3 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution.

8.2.1 **Demand-side substitution for termination services**

BTC controls the facilities for all these services and has exclusive access to the terminating facility (i.e. the local connection to the called party). Therefore there is no alternative to BTC for these services. It is unlikely that more than one provider could gain simultaneous access to the terminating parties/networks – i.e. it is unusual for consumers to have more than one access provider. In the case of automated ancillary services and operator assistance, BTC controls the actual terminating facilities and therefore it is unlikely to rescind control over the access connections to them.

➔Therefore UCRA believes that it is unlikely there could be demand-side substitution for BTC's call termination services in the time period under review.

8.2.2 **Supply-side substitution for termination services**

URCA has considered whether a 5-10% increase in the price of termination services would affect the supply of termination services. It has concluded that this is unlikely, because a small price increase is unlikely to affect the rationale set out in the demand-side substitution analysis set out above.

➔Therefore UCRA believes that it is unlikely there could be supply-side substitution for BTC's call termination services in the time period under review.

8.2.2.1 **Conclusion of substitutability test**

The SSNIP test found that it is unlikely that there will be effective substitutes within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to ex ante regulation and therefore belongs in the SMP market.

8.2.3 **EU three criteria test**

8.2.3.1 **Barriers to entry**

URCA considers that it would be costly and a long term project for a new entrant to be able to replicate the access infrastructure of BTC. Furthermore, BTC would retain control of the customers directly connected to its network unless the customers were connected to multiple networks. Therefore, the barriers to entry to provide these services are considered high.

8.2.3.2 **Emergent competition**

Termination services have been shown internationally to be inherently enduring bottlenecks and therefore URCA concludes that there is no emergent competition for these products.

8.2.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether *ex post* competition law would be sufficient to prevent market failures in future provision of this wholesale service. BTC is expected to maintain its SMP in these services and, with the exception of termination to toll-free/freephone numbers, these are services receiving very little price pressure from consumers because the contracting[104] party does not pay for the call.

If BTC were to refuse access to the termination of calls on its network for calls originating on a competing provider's network then this could prevent the development of further competition in voice services in The Bahamas. Therefore *ex ante* intervention would be required to overcome this problem and *ex post* competition law would be insufficient.

In the case of termination to toll-free/freephone numbers, there could be more price pressure on the service, but this is dependent upon there being alternative providers of the service. While it is possible that CBL will be able to offer this service in the time period under review, URCA does not think it will be able to do this to a sufficient scale and in time to render *ex ante* regulation of the BTC product unnecessary.

8.2.3.4 **Conclusion on EU three criteria test**

URCA concludes that call termination remains within the scope of the high-level SMP market for BTC.

8.2.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

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[104] In this instance the contracting party is the party contracting for connection to BTC's access network for receiving calls, whereas the party paying for the calls would be the originating party.

8.3 Backhaul (national and international)

National and international backhaul are grouped for simplicity in the following analysis because the arguments are the same for both.

These products have first been tested for substitutability, in accordance with Step 3 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution. The following SSNIP analysis is applied to a hypothetical situation in which CBL provides the wholesale services at a cost-oriented price.

8.3.1 Demand-side substitution for backhaul

Here URCA has considered whether, if BTC were to increase the price of the service by 5-10% for a non-transitory period of time, users of a BTC wholesale backhaul service would switch to alternative providers to the extent that the price increase would be unprofitable to BTC.

URCA understands that CBL may currently be offering international backhaul services through its affiliate, CCL. Therefore there may already be some competition for this service. However, for reasons set out elsewhere in this document relating to the nature of vertically integrated duopolies, URCA does not believe it is likely to provide sufficient competition to effectively constrain BTC.

➔ UCRA believes that it is unlikely there would be demand-side substitution for BTC's backhaul services in the time period under review.

8.3.2 Supply-side substitution for backhaul

URCA has considered whether a 5-10% increase in the price of backhaul would affect the supply of backhaul. It has concluded that this is unlikely, because a small price increase is unlikely to affect the rationale for the development of competing infrastructure and/or supply of wholesale services in a market at the early stages of competition.

➔Therefore UCRA believes that it is unlikely there would be supply-side substitution for BTC's backhaul services in the time period under review.

8.3.2.1 Conclusion of substitutability test

The SSNIP test found that it is unlikely that there will be effective substitutes in the areas not covered by CBL within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to ex ante regulation and therefore belongs in the SMP market.

8.3.3 EU three criteria test

8.3.3.1 Barriers to entry

In the timescale, it would seem very unlikely that there would be new physical network providers in The Bahamas. Given that BTC and CBL are already in the market, the risk involved in developing a new network for wholesale services would be considerable, which combined with the high capital cost of building networks would constitute a high barrier to entry.

8.3.3.2 **Emergent competition**

There are only two providers who are able to provide these services and URCA considers it unlikely that they will compete in the wholesale market as this would contribute to the development of increased competition in the retail markets where the two network operators would otherwise have strong competitive advantages through vertically integrated network and retail operations.

8.3.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether *ex post* competition law would be sufficient to prevent market failures in future provision of this wholesale service. BTC and CBL have near ubiquitous networks. URCA considers that these parties will have an incentive to charge high access prices for use of this service, or not provide access at all. Failure to provide the services on reasonable terms could result in a serious market failure. Therefore *ex post* competition law is considered insufficient.

8.3.3.4 **Conclusion on EU three criteria test**

URCA concludes that backhaul remains within the scope of the high-level SMP market for BTC.

8.3.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

8.4 Wholesale leased lines (national and international)

National and international wholesale leased lines are grouped for simplicity in the following analysis because the arguments are the same for both.

These products have first been tested for substitutability, in accordance with Step 3 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution. The following SSNIP analysis is applied to a hypothetical situation in which CBL provides the wholesale services at a cost-oriented price.

8.4.1 **Demand-side substitution for wholesale leased lines**

URCA has considered whether, if BTC were to increase the price of the service by 5-10% for a non-transitory period of time, users of a BTC wholesale leased lines service would switch to alternative providers to the extent that the price increase would be unprofitable for BTC.

URCA understands that CBL may offer wholesale national leased lines through its own national backbone or internationally through its affiliate CCL. There would therefore already be some existing competition for this service, were BTC to provide it. URCA has considered whether this competition would be sufficient to constrain BTC's ability to price above competitive levels. However, for reasons set out elsewhere relating to the nature of vertically integrated duopolies, URCA does not believe it is likely to provide sufficient competition to constrain BTC.

➔Therefore UCRA believes that it is unlikely there will be effective demand-side substitution for BTC's wholesale leased lines in the time period under review.

8.4.2 Supply-side substitution for wholesale leased lines

URCA has considered whether a 5-10% increase in the price of backhaul would affect the supply of backhaul. It has concluded that this is unlikely, because a small price increase is unlikely to affect the rationale for development of infrastructure and provision of wholesale services.

➔Therefore UCRA believes that it is unlikely there will be effective supply-side substitution for a BTC unbundled local loop service in the time period under review.

8.4.2.1 Conclusion of substitutability test

The SSNIP test found that it is unlikely that there will be effective substitutes within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to ex ante regulation and therefore belongs in the SMP market.

8.4.3 EU three criteria test

8.4.3.1 Barriers to entry

The cost of network development combined with the fact that there are two near-ubiquitous networks is likely to increase the risk of further network investment and may result in a substantial barrier to entry. URCA has no evidence that anybody is planning investment in substantial transmission infrastructure in The Bahamas and considers the barriers to entry to be high.

8.4.3.2 Emergent competition

Currently there are two potential providers of these services in The Bahamas – BTC and CBL. URCA sees no evidence of emerging competition between the two or of potential new market entry.

8.4.3.3 Sufficiency of *ex post* competition law

URCA has considered whether *ex post* competition law would be sufficient to stop the market failures in future provision of this wholesale service. BTC and CBL have near ubiquitous networks. URCA considers that these parties will have an incentive to charge high access prices for use of this service, or not provide access at all. Failure to provide these services on reasonable terms could have negative market effects, potentially resulting in market foreclosure. URCA therefore does not believe that *ex-post* competition remedies would be sufficient for these services.

8.4.3.4 Conclusion on EU three criteria test

URCA concludes that leased lines remain within the scope of the high-level SMP market for BTC.

8.4.4 Geographic reach

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

8.5 Bitstream access

This product has first been tested for substitutability, in accordance with Step 3 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

8.5.1 Demand-side substitution for bitstream access

Here URCA has considered whether, if BTC were to increase the price of the service by 5-10% for a non-transitory period of time, users of BTC's bitstream access service would switch to alternative providers to the extent that the price increase would be unprofitable to BTC.

There are currently no alternative providers of this product. CBL is the only possible viable alternative provider. Although CBL could provide a substitute, URCA has concerns over whether it will provide long term effective competition to BTC given that BTC and CBL are the only two operators with extensive networks and vertically integrated network and service provision.

➔Therefore UCRA believes that it is unlikely there could be demand-side substitution for BTC's bitstream access services in the time period under review.

8.5.2 Supply-side substitution for bitstream access

URCA has considered whether a 5-10% increase in the price of bitstream access would affect the supply of the product. It has concluded that this is unlikely, because a small price increase is unlikely to affect the rationale for network investment of wholesale provision of network products as set out in the demand-side substitution analysis set out above.

➔Therefore UCRA believes that it is unlikely there could be supply-side substitution for BTC's bitstream access in the time period under review.

8.5.2.1 Conclusion of substitutability test

The SSNIP test found that it is unlikely that there will be effective substitutes within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to ex ante regulation and therefore belongs in the SMP market.

8.5.3 EU three criteria test

8.5.3.1 Barriers to entry

The cost of network development combined with the fact that there are two near-ubiquitous networks is likely to increase the risk of further network investment and is likely to constitute a substantial barrier to entry.

8.5.3.2 Emergent competition

There is currently no provision of these wholesale services in the market. There are only two providers who have the networks to be able to provide these services, and URCA considers that there is little or no prospect of either provider offering this service voluntarily. URCA does therefore not foresee any substantial emergent competition for this service within the timeframe for this review.

8.5.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether *ex post* competition law would be sufficient to stop the market failures in future provision of this wholesale service. BTC and CBL have near ubiquitous networks. URCA considers that these parties will have an incentive to charge high access prices for use of this service, or not provide access at all. .As with other network components, the refusal of provision of access on reasonable terms could lead to market failure or even market foreclosure. URCA therefore does not consider that *ex-post* competition law remedies would suffice.

8.5.3.4 **Conclusion on EU three criteria test**

URCA concludes that bitstream access remains within the scope of the high-level SMP market for BTC.

8.5.4 **Geographic reach**

The geographic reach of this product is defined as the area in which BTC has facilities to provide the product.

8.6 Access to directory enquiries database and customer entry to the directory enquiries database

The product has first been tested for substitutability, in accordance with Step 3 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

8.6.1 **Demand-side substitution for wholesale directory enquiries services**

Here URCA has considered a scenario where BTC offered a product which was wholesale access to its directory enquiries database (i.e. the user of the product would obtain the actual data) and a product which allowed non-BTC subscribers to be entered into the directory enquiries database. The substitution test asks whether, if BTC were to increase the price of the service by 5-10% for a non-transitory period of time, users of these products would switch to alternative providers to the extent that the price increase would be unprofitable to BTC.

BTC currently controls the directory enquiries database and therefore no other provider could offer these products. Therefore there can be no demand-side substitution for the product.

➔ URCA considers that if BTC were to increase the price of these wholesale products by 5-10% for a non-transitory period of time, a user of the products would be unable to switch to another provider in the 12-24 month timescale. Therefore, URCA concludes there will not be demand-side substitution for this product.

8.6.2 **Supply-side substitution for wholesale directory enquiries services**

There is no evidence of the emergence of alternative providers of these services and thus URCA has not identified a viable and effective supply-side substitute.

➔ URCA therefore considers that it is unlikely there could be supply-side substitution for this product.

8.6.2.1 **Conclusion of substitutability test**

The SSNIP test found that it is unlikely that there will be effective substitutes within the 12-24 month time period that would make a non-transitory 5-10% price rise unprofitable for BTC.

Therefore URCA applied the EU three criteria test to this product to assess whether the product is susceptible to ex ante regulation and therefore belongs in the SMP market.

8.6.3 **EU three criteria test**

8.6.3.1 **Barriers to entry**

In order for an alternative provider to provide these products, it would need to gain control of BTC's directory enquiry database. Absent regulation, this is very unlikely to happen as it would not be in BTC's commercial interests. Reproducing the database is also not likely to be a viable option for a potential new entrant. Therefore barriers to entry are high for this product.

8.6.3.2 **Emergent competition**

There is no emergent competition for this product and given the nature of the product (discussed above), URCA believes that this situation is unlikely to change.

8.6.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether *ex post* competition law would be sufficient to stop the market failures in future provision of this wholesale service. URCA does not think it likely that competition will emerge in this market without intervention and URCA is not of the belief that BTC would seek to offer these products unless obliged to. Consequently, URCA believes that *ex-post* competition law will be insufficient.

8.6.3.4 **Conclusion on EU three criteria test**

URCA concludes that wholesale directory enquiries remains within the scope of the high-level SMP market for BTC.

8.6.4 **Geographic reach**

These products are not network-based, and do not have a geographic reach in the same way as network-based products. BTC would be expected to provide access to the directory enquiries database within The Bahamas and entry to the database to the same types of subscribers it would itself enter into the directory.

8.7 Conclusion for wholesale products

URCA has concluded that the following products remain part of the relevant market for fixed voice and data for which BTC has SMP:

1) Call transit (national and international)

2) Call termination services (national and international)

3) Backhaul services (national)

4) Backhaul services (international)

5) Wholesale leased lines services (national)

6) Wholesale leased lines services (international)

7) Wholesale directory enquiry and automated ancillary services

8) Bitstream access service

Appendix 2 – Background to mobile voice and mobile data services

9 Description of products

In accordance with Step 2 of the Methodology, this Section will describe the products offered by the licensee with presumed SMP in the mobile voice and mobile data market, in this case BTC. The description will cover:

- Characteristics of BTC's products
- Prices
- Geographical reach of the products; and
- Consumer behaviour around the products

This Section will also describe all possible substitutes available to consumers for these products. This will include both products already existing in The Bahamas and future products which URCA considers are likely to be launched in the 12-24 month period under consideration.

This will result in a full portfolio of products to enable URCA to undertake the substitutability analysis considered in the next Section.

9.1 Products in the high level SMP market

This analysis has taken as its starting point the mobile voice and mobile data services offered by BTC, as it is the operator presumed to have SMP in the market, under the Comms Act. BTC offers a wide range of mobile services with different specifications and prices which have been grouped into the following high level categories:

- Mobile voice
- Mobile data

BTC currently has exclusivity in mobile voice services. This exclusivity is due to expire two years after the sale of shares in BTC to a private investor[105].

The products constituting BTC's mobile services are described in more detail below. In accordance with the Methodology this includes the key characteristics, prices and coverage.

[105] See draft Electronic Communications Policy dated July 2009 at http://btcprivatisation.com/uploads/Sector%20Policy%20Newspaper%20Supplement%20Aug09.pdf which states new "…cellular providers would be licensed to offer services 24 months after the date when the Government no longer owns a majority of BTC."

9.2 Mobile Voice

9.2.1 **BTC**

9.2.1.1 **BTC's Current Offering**

As mentioned above, under the Comms Act, BTC is presumed to have SMP in mobile voice and mobile data services. Mobile voice is the main any-to-any service offered on mobile networks in The Bahamas and includes:

- Mobile access;
- Local calling;
- Domestic Long Distance (DLD) mobile calling; and
- International Long Distance (ILD) mobile calling.

These products are described in more detail below.

9.2.1.2 **Mobile Access**

Mobile access enables a customer to make or receive calls at any location. Whilst BTC provides the access service, both pre- and post-pay customers must purchase their own mobile handset.

The penetration rate in The Bahamas for mobile phones was close to 10% in 2008. Approximately 85% of subscribers use a prepaid service[106].

Although URCA has not conducted a formal survey on BTC's customer base, anecdotal evidence indicates that consumers are dissatisfied with the level of service quality received from BTC's mobile services. For example, in-building coverage and network congestion are problems which have been identified.

Prepaid calling cards are readily available in The Bahamas and come in units of $5, $10, $20, $50, and $100. Prepaid mobile customers do not pay a monthly subscription fee and do not receive a monthly bill. Users purchase blocks of airtime via so-called 'scratch cards', with PIN numbers which allow them to access their entitlement, and which must be used within a specified time. Prepaid subscribers receive voicemail, caller ID, and call forwarding at no additional charge.

BTC Pre-paid local calling prices

Time/date	$/minute
Peak (7:00 a.m. to 7:00 p.m.)	0.33
Off Peak (7:00 p.m. to 7:00 a.m.)	0.15
Weekend	0.20

Source: URCA

[106] Source: BTC data

BTC also offers six distinct post-paid mobile voice packages. These packages allow the subscriber to pay a monthly subscription fee and receive a combination of airtime and calling features. Two of the post-paid packages allow users to send an allotted number of 'free' text messages per month. When customers exceed their allotted airtime/number of text messages for the month, they are billed at the relevant out-of-plan prices. Details of these packages are shown in the table below:

BTC Post-paid price plans

$/month	Offering (minutes)	Package Features	Out of Plan Prices for Additional Minutes[107]
10	A la carte pricing	Includes: Caller ID, Voicemail, Call waiting and Multi-party calling	$0.20/minute week days, $0.10/minute evenings, $0.15/minute weekends
19.99	100 Domestic Airtime Usage	Includes: Caller ID, Voicemail, Call waiting and Multi-party calling	$0.20/minute week days, $0.10/minute evenings, $0.10/minute weekends
29.99	160 Domestic Airtime Usage	As package above	As package above
59.99	375 Domestic Airtime Usage	Includes: Caller ID, Call Waiting, Call Forwarding, Voicemail, Multi Party Calling	$0.15/minute week days, $0.10/minute evenings, $0.10 /minute weekends
99.99	650 Domestic Airtime Usage	As above plus 100 Text Messages	As package above
139.99	1,100 Domestic Airtime Usage	As above plus 300 Text Messages	$0.10/minute week days, $0.10/minute evenings, $0.10/minute weekends

Source: URCA

URCA understands that approximately 15% of mobile subscribers use a post-paid service[108].

Characteristics

From the end-user's perspective, mobile access has the following characteristics:

- Medium level of quality of service,
- Calls are maintained when moving between different locations ("Cell to cell handover"),
- Direct dialling,
- Allows a customer to make/receive calls in wide range of locations, including overseas,

[107] Week days: Monday through Friday inclusive; Weekends: Saturday and Sunday; Evenings: 7:00 p.m. to 6.59 a.m.

[108] Source: BTC data

- Two-way communications in real-time,
- Numbers can be personalised to an individual contact,
- Ability to call Bahamian emergency services and directory information services,
- Ability to use either pre-paid or post-paid, and
- Available for use by both business and residential consumers.

Coverage

The service is available throughout The Bahamas.

9.2.1.3 **Local Mobile Calling**

Mobile local calling refers to calls from mobile phones to fixed and mobile numbers on the same island in The Bahamas.

As previously stated, there are two types of product available to consumers in The Bahamas, pre-paid and post-paid. The prices for these services are shown above in Section 9.2.1.2.

Characteristics

From the end-user's perspective, in addition to the characteristics of mobile access, local mobile calling has the following characteristics:

- Medium level of quality of service,
- Calls are maintained when moving between different locations ("Cell to cell handover"),
- Direct dialling,
- Allows a customer to make/receive calls in wide range of locations, including overseas,
- Two-way communications in real-time,
- Ability to call Bahamian emergency services and directory information services,
- Ability to use either pre-paid or post-paid, and
- Available for use by both business and residential consumers.

Coverage

The service is available throughout The Bahamas.

9.2.1.4 **DLD Mobile Calling**

This service includes calls from mobile phones to fixed and mobile numbers on different islands in The Bahamas. A pre-paid customer must pay the airtime charge (local calling price) as well as an additional DLD charge per minute of the call. A post-paid customer must only pay these charges when they exceed the allotted minutes of their plan.

DLD Mobile Calling

Time/date	Airtime: $/minute	Additional DLD charge $/minute
Peak (7:00 a.m. to 7:00 p.m.)	0.33	0.18
Off Peak (7:00 p.m. to 7:00 a.m.)	0.15	0.18
Weekend	0.20	0.18

Source: URCA

Characteristics

From the end-user's perspective, in addition to the characteristics of mobile access, DLD mobile calling has the following characteristics:

- Medium level of quality of service,
- Calls are maintained when moving between different locations ("Cell to cell handover"),
- Direct dialling,
- Allows a customer to make/receive calls in wide range of locations, including overseas,
- Two way communication in real-time,
- Available for use by both business and residential consumers.

Coverage

The service is available throughout The Bahamas.

9.2.1.5 **ILD Mobile Calling**

This service includes:

- Outgoing ILD calls made from mobile numbers in The Bahamas to fixed and mobile phones in another country; and
- Incoming ILD calls to a Bahamian mobile number.

Calls to overseas destinations are billed at the per minute usage rates specified below. A pre-paid customer must pay the airtime charge (local calling price) as well as the

international charges, whereas a post-paid customer must pay any airtime in excess of the minutes allotted to them through their plan as well as the international charges:

BTC Pre-paid local calling prices

Time/date	$/minute
Peak (7:00 a.m. to 7:00 p.m.)	0.33
Off Peak (7:00 p.m. to 7:00 a.m.)	0.15
Weekend	0.20

Source: URCA

Prices for Outgoing ILD Calls (prepaid/post-paid)

Area	$/minute
USA	0.47
Canada	0.50
Caribbean	0.66
Cuba	0.85
Rest of World	0.85

Source: URCA

Characteristics

From the end-user's perspective, in addition to the characteristics of mobile access, international long distance calling has the following characteristics:

- Medium level of quality of service,
- Calls are maintained when moving between different locations ("Cell to cell handover"),
- Direct dialling,
- Calls can be made/received in wide range of locations, including overseas,
- Two way communication in real-time,
- Available for use by both business and residential consumers.

Coverage

This service is available throughout The Bahamas.

9.3 Mobile Data

Mobile data includes sending and/or receiving SMS/MMS and access to the Internet.

9.3.1 **BTC**

9.3.1.1 **BTC's current offering**

BTC offers national and international text messaging services and has recently launched a Multimedia Messaging Service (MMS). The company also offers a service that enables subscribers to send/receive email and access the internet via their mobile phones.

The pricing plans and rates for all outbound text messages are specified in the table below:

BTC Price plans for Short Messaging Service (SMS)

	Prices	**Number of text messages**	**Price per additional text message sent**
TexiLite	$5.00/month	300 Domestic Outbound Text	$0.05
Texislim	$9.99/month	750 Domestic Outbound Text	$0.03
Teximax	$14.99/month	Unlimited Domestic Outbound Texts	N/A
Pay per use	$0.05/Domestic Outbound Text	n/a	-
	$0.15/International Outbound Text	n/a	-

Source: URCA

All inbound international and domestic text messages are free of charge.

The pricing plans and rates for BTC's internet access products are specified below:

BTC's internet access products

Package	**Prices ($)**	**Details**
Postpaid	24.99/month	Unlimited access
Prepaid	0.03	Per kilobyte of data sent
Blackberry service	39.99/month	Unlimited access but is only available on a postpaid basis

Source: BTC

Characteristics

From the end-user's perspective, mobile data has the following characteristics:

- Medium level of quality of service,

- Connection is maintained when moving between different locations ("Cell to cell handover"),
- Ability to send/receive SMS/MMS and access the internet[109] whilst travelling within and outside of The Bahamas,
- Two way communication, and
- Available for use by both business and residential customers.

Coverage

This service is available throughout The Bahamas.

9.4 Possible Substitutes

This Section outlines the products which could be possible substitutes for BTC's mobile products. It covers those products which:

- Are currently available; and
- Could become available within the 12-24 month time period under review.

In the next sections, URCA has reviewed the following possible substitutes:

- Currently available: IndiGO prepaid calling card, Voice over Internet, WiFi over a mobile handset, Public Payphones, Paging Services, Fixed telephony access and local calling, DLD fixed calling, and ILD fixed calling.
- Emerging substitutes: WiMax, MVNOs (mobile virtual network operators)[110].

Future products, including both new products and expansions or improvements in current products, have only been considered when URCA believes that there is a reasonably high probability of their being available to consumers to the extent that they could constrain BTC's prices in the 12-24 month period under review.

The products are organised by provider:

- SRG
- International VoI providers
- BTC fixed telephony
- Public Paging

[109] This depends on the specifications of the mobile handset purchased by the consumer.
[110] There is interest from local and international companies to operate a competing mobile service to BTC. However, BTC's exclusivity means that competitive supply in mobile voice services will not be possible within the 12-24 month period considered in this review.

- WiFi over a mobile handset

9.4.1 **SRG**

SRG currently offers products which could substitute for the following BTC products:

- Mobile access and local calling;
- DLD mobile calling; and
- ILD mobile calling.

9.4.1.1 **Current SRG products**

Fixed wireless access and calling

SRG (trading as IndiGO) offers a fixed access product comparable to BTC's for business customers, known as "IndiGO for business". This uses SRG's fixed wireless access network. SRG has interconnection arrangements with BTC to terminate domestic calls on its network and vice versa. The international transit of the calls is via an international fibre link.

The service includes features such as voicemail, fax server, call accounting and unified messaging integration services. URCA understands that the reliability and quality of the service is high, and the hardware and software requirements are simple.

SRG's prices for access and calling are shown below:

SRG fixed access prices[111]

PRI/ T1[112] **CIRCUIT SERVICE FEES**	**$**
Installation Fee	960 per circuit
1-Year Agreement	444/ month
3-Year Agreement	408/ month
5-Year Agreement	384/ month

ANALOG TRUNKS SERVICE FEES	**$**
Installation Fee	40 per line
Service Charge	35/ month

[111] Source: SRG data provided to URCA

[112] A PR1/ T1 is a full-duplex circuit consisting of 24 channels, which transmits and receives 1.544 Mbps concurrently.

SRG Fixed access calling prices

LONG-DISTANCE CALL RATES	
Destination	**Rate per minute ($)**
Bahamas Islands	0.17
United States	0.39
Canada	0.41
Caribbean	0.59
Cuba/ All Other Countries	0.69
VOLUME DISCOUNT PLAN § >$5,000 Long-Distance Usage = 5% discount § >$10,000 Long-Distance Usage = 7.5% discount § >$15,000 Long-Distance Usage = 10% discount § >$50,000 Long-Distance Usage = 20% discount	

URCA understands that the receiver equipment for this service requires mains power at the customer's premises and therefore this service would not function during a power outage. Subscribers receive their own personal geographic number, and calls to emergency services are possible.

Coverage

SRG's fixed access and calling services are only available in New Providence, Grand Bahama and Abaco.

<u>SRG prepaid calling card</u>

SRG also sell prepaid phone cards which contain credit for making phone calls. They are targeted largely at the residential market. They can be used to call from any touch tone phone, including pay phones, BTC fixed phones and mobile phones. URCA does not believe that they can be used overseas. Customers receive a PIN when they buy the phone card. This must be dialled before the telephone number of the receiving party. SRG's pre-paid phone cards can be used for local, direct long distance and international long distance calls. This way of calling is known as two-stage calling.

The call is usually originated through the BTC fixed or mobile access networks. Domestic calls will remain on BTC's network, except in cases where the receiving party is an SRG customer. The international transit of the call is performed on an international leased line.

The cards come in units of $5, $10 or $20. They are sold at major retailers and are therefore quite easily available to most Bahamian residents. The prepaid rates are shown below.

SRG prepaid calling rates[113]

Destination	Rate per minute ($)
Family Islands	0.17
USA/Canada	0.44
Caribbean	0.49
Cuba	0.99
Rest of World[114]	0.69

Voice over Internet (Onephone)

Voice over Internet (VoI) is a service that uses a broadband connection to carry voice calls over the internet rather than the traditional telephone network (typically PSTN[115]). VoI is a "nomadic" service: meaning that the subscriber is able to make and receive national and international telephone calls from different locations. Unlike mobile services, however, calls cannot be maintained when moving between all different locations, i.e. there is no "cell to cell handover".

To make a VoI call, the consumer requires specific software[116] and a broadband connection to the internet. The software will handle the call routing to make sure the call reaches the intended destination as well as providing the codec[117]. The software can be installed on a variety of hardware devices including traditional telephone handsets (using an adaptor that plugs into the telephone[118]) or a PC or wireless device such as a Personal Digital Assistant (PDA).

SRG offers a VoI product called Onephone to residential and business customers. The product requires:

- A broadband connection such as Cable, DSL or IndiGO Wireless (bought from BTC, CBL or SRG respectively),

[113] Source: SRG website as at August 2009.
[114] With some minor exceptions.
[115] This is the traditional phone system, using circuit switching to make and maintain connections for the duration of a phone call. Also referred to as the 'landline' network, it uses a copper wire network to carry analogue voice data.
[116] To convert the caller's analogue voice signal into a digital format, then Compress and translate the digital signal into discrete Internet Protocol packets for transmission over the internet.
[117] A device or computer that is capable of encoding/decoding digital data.
[118] A traditional phone may be used by making use of an Analogue Telephone Adapter (ATA) or alternatively an IP Phone can be used.

- An IndiGO phone adaptor,
- Any touch-tone phone, corded or cordless.

Calls to emergency services interconnect with BTC, who terminates the calls with the police. "On-net" calls to other Onephone subscribers are free and there are a number of price plans for other calls, shown below.

Onephone prices

Package	**Description**	**Price** ($ per month)
Local calling plan	Unlimited Onephone to Onephone calls, (unlimited incoming and outgoing calling), low rates to Grand Bahama and Abaco	9.95
Basic plan	Local phone number, 500 minutes to US, Canada & selected European countries	19.95
Onephone complete	Local phone number, 250 minutes to US, Canada, the Family Islands and other neighbouring Caribbean Islands	29.95
Value plan	Local phone number, unlimited minutes to US, Canada & selected European countries	34.95

Source: SRG website

Coverage

The VoI product is currently available in New Providence and Grand Bahama for residential customers, and only New Providence and Freeport (Grand Bahama) for business customers. SRG has suggested that it may roll the service out to Abaco as well.

Payphones

SRG also offers public payphone services, either on its own accord or through third party agents, mainly for non-residents at a few select locations such as hotels, airports, marinas, docks and shopping centres.

URCA does not have detailed information about the price or precise locations of these. The total number is not believed to be large. URCA understands that the quality of service to be high and that direct dialing is possible.

9.4.1.2 **Possible future SRG products**

SRG's licence enables it to offer mobile data services, but URCA is not aware of any plans for new services, or expansions of current services, to be launched by SRG.

9.4.2 **BTC**

BTC fixed telephony service provides a possible substitute for:

- Mobile access and local calling,
- DLD mobile calling,
- ILD mobile calling, and
- Mobile data

9.4.2.1 **Current BTC products**

Fixed Telephony access and local calling

BTC offers a residential and a business fixed access service. The price of this service is $15 per month for residential customers, $12 per month for qualifying senior citizens and $36 per month for business service.

BTC Monthly Fixed Line Rental

Access Service	**$/Month**
Residential	15.00 12.00 (qualifying senior citizens)
Business	36.00

Source: URCA data obtained from BTC

BTC provides domestic fixed voice calling to subscribers to its fixed access service. Intra-island calls are "free" (i.e. they are bundled with fixed access and incur no additional per-minute usage charge).

The monthly access charge also includes unlimited local calls to emergency services, directory services, automated ancillary services (e.g. weather by phone, time of day, etc.) and mobile numbers. These are also "free". The standard one-time installation fee for fixed wire-line service is $50 for both residential and business customers.[119]

The service demonstrates high quality of service when compared to mobile. The service does not rely on the mains power supply and consequently will remain operational during a power outage. A fixed handset is required but there are no additional hardware or software requirements. Customers obtain a geographic number and are able to store up to nine numbers on the handset allowing speed dialing.

Coverage

[119] BTC also makes a range of Custom Local Area Signaling Services (CLASS) features available to residential and business subscribers, with each package available for a monthly fee, these include: Voicemail, Call Forwarding, Three-way Calling, Call Waiting, and Selective Call Forwarding. These services cost between $0-$10 per feature per month.

Fixed access includes inclusion in the telephone directory, by which URCA means the automatic inclusion of a subscriber's number in BTC's telephone directory

BTC's telephony access is available throughout The Bahamas.

DLD fixed voice calling

This is domestic voice calling available at a fixed point on the subscriber's premises, both incoming and outgoing. It includes calls to:

- Numbers on other islands in The Bahamas.
- Non-geographic[120] numbers for which there is a call charge[121].

BTC provides domestic fixed voice calling to subscribers to its fixed access service. The per minute usage charge for the service is $0.18. Residential and business customers pay the same price for the service.

The service demonstrates high quality of service when compared to mobile. The service does not rely on the mains power supply and consequently will remain operational during a power outage. A fixed handset is required but there are no additional hardware or software requirements. Customers obtain a geographic number.

Coverage

This service is available throughout The Bahamas to subscribers of BTC's fixed access service.

9.4.3 **ILD fixed voice calling**

This is international voice calling available at a fixed point on the subscriber's premises, both incoming and outgoing.

BTC offers international voice calling to subscribers of its fixed access service.

[120] Non-geographical numbers are telephone numbers available for private sale which, rather than being assigned to a particular telephone line or circuit, provide callers with a contact number which (aside from the 242 area code) gives no indication as to the geographical location of the line being called.

[121] Included in this category is calls to freephone numbers, for which there is a charge to the entity commissioning the freephone number, i.e. the receiving customer pays to receive the calls. URCA understands that this charge is normally commercially negotiated.

BTC Outgoing International Retail Prices

Service	$/Minute
USA	0.47
Canada	0.50
Caribbean	0.66
Cuba	0.85
Rest of World	0.85

Source: URCA data obtained from BTC

BTC also sells pre-paid debit cards ("phone cards") which can be used to make domestic and international calls from some payphones in The Bahamas. These debit cards are a payment method for BTC's calling products. Therefore they are not treated as products in their own right.

The service demonstrates high quality of service when compared to mobile. Similar to DLD fixed voice calling, the service does not rely on the mains power supply and consequently will remain operational during a power outage. A fixed handset is required but there are no additional hardware or software requirements. Customers obtain a geographic number.

Coverage

This service is available throughout The Bahamas to subscribers of BTC's fixed access service.

Voice over Internet (ViBe)

BTC's VoI service is know as 'ViBe' and uses traditional telephone handsets. BTC offers various flat-rate VoI calling plans to Bahamian subscribers.

There are two plans available as set out below.

BTC Voice over Internet (ViBe) price plans

Package	Description	With iConnect[122] ($ per month)	Without iConnect ($ per month)
Base pack	500 minutes to the US, UK, Canada, Switzerland, Puerto Rico and The Bahamas	14.99	19.99
Value pack	Unlimited calling to the US, UK, Canada, Switzerland, Puerto Rico and The Bahamas	29.99	34.99

Source: BTC website

[122] This is the price to a consumer if they also purchase the iConnect service from BTC, this does not represent the price for both services.

Calls to other international destinations are considered "out-of-plan" calls: charges range from $0.20 to $1.90 per minute, depending on the destination. ViBe also allows connections to the police for emergency services.

URCA believes that VoI has low-medium quality of service, it allows calls to the Bahamian emergency services, it is nomadic and subscribers can receive a geographic phone number.

Coverage

This product has the same geographic reach as the broadband services it relies on. BTC has the greatest coverage of all the broadband services offered in The Bahamas and therefore the geographic reach of VoI is the same as that of BTC broadband. BTC broadband is available in New Providence, Grand Bahama and Abaco Andros, Berry Islands, Bimini, Crooked Island, Eleuthera, Exuma, Inagua, Long Island and San Salvador[123].

Public payphones

Public payphones are public telecommunications terminals which use coin- or card-based payment on a per-transaction basis. Payphones are located outdoors and indoors in public places. Also included are semi-public phones available on a restricted basis owing to their location, for example payphones on private premises such as restaurants.

Public payphones form part of BTC's universal service obligation. The coin rate for a local direct-dialed payphone-to-payphone or payphone-to-mobile call from a public payphone is 25¢ for up to 5 minutes.

URCA understands that the product demonstrates high quality of service, provide guaranteed access to emergency numbers, allow direct dialing and do not require a subscription.

Coverage

BTC offers public payphone services in most islands of The Bahamas.

9.4.3.1 **Possible future BTC products**

URCA is not aware of any new products likely to be released by BTC in the 12-24 month time period considered in this review.

9.4.4 **Various international VoI providers**

International VoI providers could provide a possible substitute for:

- Mobile access and local calling,
- DLD mobile calling,
- ILD mobile calling, and
- Mobile data

[123] Source: information provided by BTC

9.4.4.1 **Current products offered by VoI providers**

This service enables the subscriber to make and receive long distance telephone calls from different locations (i.e. the service is nomadic). Unlike mobile services, however, calls cannot be maintained when moving between all different locations, i.e. there is no "cell to cell handover".

The first VoI services offered in The Bahamas were offered by specialist international VoI companies. The principal providers are magicJack, Vonage and Skype, all of whom offer similar services and prices.

All require access to a broadband connection to function to a reasonable standard. The broadband connection must be purchased from a local broadband access provider. The customer must also have specialist software and hardware. Calls can be made from any location as long as the necessary hardware and high speed internet connection is available.

Unlike BTC's and SRG's VoI services, customers of international VoI providers are unable to have a Bahamian geographic number associated with their connection. Furthermore, calls to a Bahamian emergency number are not possible.

The table below contains a sample of packages offered by the principal providers of VoI services.

Sample of magic Jack, Vonage and Skype prices

Provider	Package	Description	Monthly rate
Vonage	V-Plan 2	Plan includes: Unlimited calls to landlines in 15 countries ; Unlimited calls to mobiles in 2 countries; Unlimited Vonage-to-Vonage calls	$7.99 per month
	V-Plan 5	As above but unlimited landline calls to 45 countries and to mobiles in 5 countries	$18.99 per month
Skype	Unlimited World	Unlimited calls to landlines in over 40 countries worldwide, not including The Bahamas	$12.95 per month, $0.89 per minute to make calls to mobiles and land lines in The Bahamas
magicJack	-	Free calls to the United States, Canada, Puerto Rico and the US Virgin Islands	$39.95 for the device, plus $19.95 for each year after the first year, which is free ➔ equivalent of $3.33 per month for first year, then $1.66 per month for subsequent years

Source: Company websites

Coverage

Because the service requires a broadband connection, it is limited by the availability of broadband. The two main providers of broadband services in The Bahamas are BTC and CBL, both of whom have near complete coverage of the Bahamian population[124].

9.4.4.2 **Possible Future products by VoI providers**

URCA is not aware of any new products in this area which may emerge in the 12-24 month time period.

9.4.5 **Public Paging Operators**

A pager (sometimes called a page, beeper or bleep) is a simple personal telecommunications device designed to send short messages. A one-way numeric pager can only receive a message consisting of a few digits, typically a phone number that the user is then expected to call. Alphanumeric pagers are available, as well as two-way pagers that have the ability to send and receive email, numeric pages, and SMS messages.

URCA considers whether this service is a possible substitute for BTC's mobile data service. There are at least nine entities currently providing pager services to the Bahamian public, thus making this a competitive market. URCA has no information on the price and usage of the service. However, it is believed that with the advent of mobile services demand for the service has decreased[125].

Coverage

URCA understands that the services are available on the Islands of New Providence, Eleuthera, and Grand Bahama.

9.4.6 **WiMax**

WiMax is a telecommunications technology that provides wireless transmission of data using a variety of transmission modes, enabling fixed voice, fixed broadband, mobile voice and mobile broadband.

From the end-user's perspective, WiMax has the following characteristics:

- It is nomadic

- Hand-held devices with the ability to stay connected to a WiMax network when moving between locations (cell-to-cell handover) are still at least 12 months away from commercial deployment.

Whilst URCA believes SRG is technically able to provide this service there has not been any interest to indicate that it will. Additionally, current regulatory stipulations provide BTC with

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[124] Data provided to URCA by the operators

[125] Based on BTC's Annual Reports for 2006 and 2007, revenue for paging services declined from $801,000 in 2005 to $164,000 in 2008.

a two year exclusivity period for the provision of mobile voice services after the sale of majority shares in the company to a private investor. Therefore emerging WiMax operators will be unable to offer mobile voice services to the Bahamian public within the 12-24 month time period under review, and have therefore not been considered further in this analysis.

9.4.7 **Mobile Virtual Network Operators (MVNOs)**

A mobile virtual network operator (MVNO) is a company providing mobile phone service but which does not have its own licensed frequency allocation of radio spectrum, nor does it necessarily have the entire infrastructure required to provide mobile telephone service. Although an MVNO may use operational and business support systems from the host mobile network operators, MVNOs usually have full control over the SIM card, branding, marketing, pricing and billing, and customer care operations.

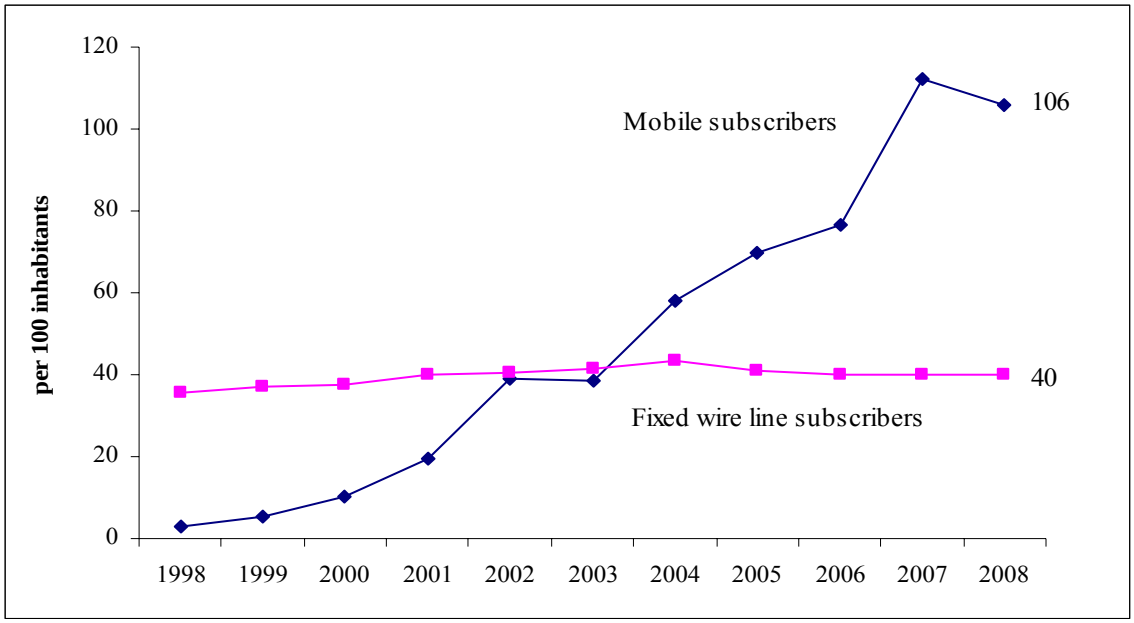
As previously noted, current regulatory stipulations provide BTC with a two year exclusivity period for the provision of mobile voice services after the sale of majority shares in BTC to a private investor. Thus, an MVNO entering The Bahamas during the review period would need to establish commercial arrangements with BTC to buy end-to-end services for resale to their own customers.

BTC does not have any incentive to provide this wholesale service, as it would impact the profits they generate in the retail mobile voice market, consequently URCA does not believe that MVNOs will be effective substitutes in the time period under review and has not considered it further in this analysis.

9.5 Consumer behaviour in the market

The chart below shows the pattern in evolution in mobile and fixed line telephony from 2000 to 2008. In 2008, mobile connections were close to 100%of penetration. . Meanwhile, fixed line subscriptions went up marginally from 38 subscribers per 100 inhabitants (in 2000) to 40 subscribers per 100 inhabitants (2008)[126]. It appears from the data that the majority of consumers who have fixed line services also have mobile network connections.

Telephone connections in The Bahamas[127]



[126] It should be noted that as there is often only one fixed line per household but several individuals in each household. 40% penetration of fixed services is likely to represent close to 100% penetration of households.

[127] Source: ITU, includes residential and business consumers.

10 Retail products in the high level SMP market

This Section describes the analysis performed on the products identified in Section 9 using the Methodology described in Section 4.

The following products are examined in turn:

- Mobile access and local calling,
- DLD mobile calling,
- ILD mobile calling, and
- Mobile data.

URCA has firstly considered the demand- and supply-side substitutes for these products, in accordance with Step 2 of the Methodology.

Those products for which URCA does not identify effective demand- or supply-side substitutes within the defined period are then subjected to the EU three criteria test, in accordance with Step 2 of the Methodology:

- the presence of high and non-transitory entry barriers;
- a market structure which does not tend towards effective competition during the timeframe of this review; and
- the application of competition law alone would not adequately address market failures that may arise.

The application of these criteria is used to determine whether to exclude a product from the high level market for which the operator is presumed to have SMP.

10.1 Mobile Access

The product has first been tested for substitutability, in accordance with Step 2 of the Methodology. It was tested first for demand-side substitution and then for supply-side substitution.

10.1.1 **Demand-side substitution for mobile access**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for mobile access by 5-10% for a non-transitory period of time. Would this be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: Fixed access and local calling (BTC, SRG), Voice over Internet (BTC, SRG, and International VoI Providers), Public payphones.

SRG's Fixed Access

In response to a 5-10% increase in the price of BTC's mobile access, customers could switch to an SRG fixed access connection.

Characteristics

SRG fixed access has very few of the characteristics of mobile access. Firstly, it is only available to business customers, thus excluding a large segment of the Bahamian public. The service is only available at fixed locations (i.e. mobility is not a feature of the service) and popular features such as the ability to choose a pre-pay or post-pay plan, allowed by mobile access, are not available. Due to the difference in characteristics, URCA believes that SRG's fixed access would not be considered by consumers as an effective substitute, despite anecdotal evidence suggesting that the quality of service is higher than that of mobile.

Price

For post-paid customers, mobile access prices are high compared to SRG's fixed access, as shown in the pricing tables in Section 9.3.2.1. In this case, price would not be a significant barrier to switching. However, in the case of prepaid customers (who constitute 85% of mobile subscribers) a key characteristic of mobile services is the ability to pre-pay and, as a result, avoid recurring charges (such as a monthly rental charge). For these customers, who are to a large extent able to control their expenditure on mobile services, the cost of fixed services is relatively high. As such, price is likely to be a significant barrier to switching.

Coverage

BTC's mobile coverage extends to the entire Bahamas while SRG's is limited by its existing licence to the major islands of New Providence, Grand Bahama, and Abaco.

➔ Based on the evidence available, it is URCA's view that SRG's fixed access is unlikely to be an effective substitute to BTC's mobile. URCA believes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

BTC Fixed Access

In response to a 5-10% increase in the price of BTC's mobile access, mobile customers could switch to a BTC fixed access connection.

Characteristics

BTC's fixed access and BTC's mobile access exhibit several similar characteristics. However, BTC's fixed access lacks the important characteristic of mobility, it is only available at fixed locations and would not allow customers to make and received calls when travelling outside of The Bahamas. Additionally, features such as the ability to choose a pre-pay or post-pay service, allowed by mobile access, are not available and phone numbers cannot be personalised to individual contacts.

Prices

For post-paid customers, mobile access prices are high compared to BTC's fixed access, as shown in the pricing tables in Section 9. In this case, price would not be a significant barrier to switching. However, in the case of prepaid customers (who constitute 85% of mobile subscribers) a key characteristic of mobile services is the ability to pre-pay and, as a result, avoid recurring charges (such as a monthly rental charge). For these customers, who are to a large extent able to control their expenditure on mobile services, the cost of fixed services is relatively high. As such, price is likely to be a significant barrier to switching.

Coverage

BTC's fixed service has near complete coverage of The Bahamas and therefore coverage within The Bahamas would not be a significant barrier to switching

➔ URCA believes that BTC's fixed access is unlikely to be an effective substitute for BTC's mobile access. URCA does not consider that a substantial number of subscribers to BTC's mobile services would switch to BTC's fixed access if mobile access prices increased by 5-10% for a non-transitory period of time. URCA therefore concludes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

International VoI Providers

Is it possible that customers could, in response to a 5-10% price increase for mobile access, switch to a VoI provider?

Characteristics

As shown in the summary table at the end of this Section, VoI does not possess the majority of characteristics that BTC's mobile network does. Notably, the service does not offer mobility, has a lower quality of service, and access to Bahamian emergency numbers is not provided.

Price

VoI prices are less expensive than BTC's mobile packages and price does not therefore appear to be a significant barrier to switching to VoI. However, VoI services require a broadband connection and the charges associated with a broadband connection (such as a monthly rental fee) would be a barrier to switching for pre-pay mobile customers.

Coverage

Use of the VoI service requires a broadband connection. URCA understands that broadband connection is available throughout The Bahamas, although the price is considered high in some areas and currently broadband is not taken by a significant proportion of the population.

➔ Based on the evidence available, URCA does not consider that a substantial number of subscribers to BTC's mobile packages would switch to international VoI providers were BTC to increase its price by 5-10% for a transitory period of time.

VoI from BTC and SRG

Is it possible that customers could, in response to a 5-10% price increase for mobile access, switch to a VoI provider, such as BTC's ViBe product or SRG's Onephone service?

Characteristics

As shown in the summary table at the end of this Section, VoI services from BTC and SRG do not possess the majority of characteristics shown by BTC's mobile access. In particular, VoI does not provide mobility and provides a lower quality of service.

Price

The prices of both products are lower than BTC's mobile packages and price does not therefore appear to be a barrier to switching to SRG's Onephone service and BTC's ViBe product. However, VoI services require a broadband connection and the charges associated with a broadband connection (such as a monthly rental fee) would likely be a barrier to switching for pre-pay mobile customers.

Coverage

VoI coverage is limited only by the availability of a broadband connection. Broadband is available throughout The Bahamas, although the price is considered high in some areas and currently broadband is not taken by a significant proportion of the population. Overall, URCA does not consider coverage to be a significant barrier to switching.

➔ URCA considers that mobility, quality of service considerations and the need for high speed internet are barriers to switching to SRG's OnePhone service and BTC's ViBe service. As such, URCA does not consider that a substantial number of subscribers to BTC's mobile packages would switch to local VoI providers were BTC to increase its price by 5-10% for a transitory period of time.

Public Payphones (BTC, SRG)

Is it possible that customers could, in response to a 5-10% price increase for mobile access, switch to public payphones?

Characteristics

Public payphones have some of the characteristics of mobile access, for example, it provides access to a Bahamian emergency number and directory information services. However, the service lacks important characteristics such as mobility and reasonable use by business consumers. Payphones are also only available in a limited number of locations and the inconvenience of finding a pay phone would likely be a barrier to switching.

Price

Prices are generally lower than BTC's mobile packages and for this reason URCA does not consider price to be a barrier to switching to public payphones were BTC to increase its price by 5-10% for a transitory period of time.

Coverage

URCA understands from BTC's routing guide that there are currently 64 locations in The Bahamas with access to a BTC payphone so the service is believed to be available in most parts of The Bahamas. URCA is unclear on the number and locations of SRG's payphones.

➔URCA does not consider that a substantial number of subscribers to BTC's mobile access service would switch to public payphones were BTC to increase price by 5-10% for a non-transitory period. URCA therefore concludes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

10.1.2 Supply-side substitution for mobile access

URCA has considered whether a 5-10% non-transitory increase in the price of BTC mobile access would likely lead to a change in the supply of services, either new suppliers entering the market or a change in the nature of current provision.

It is not possible for a new mobile operator to enter the market within the 12-24 month review period due to the exclusivity held by BTC. As previously stated current regulatory stipulations provide BTC with a two year exclusivity period for the provision of mobile voice services. This exclusivity is set to expire two years after the sale of majority shares in BTC to a private investor.

➔Due to this exclusivity, URCA considers that there will not be effective supply-side substitutes for BTC mobile access and local calling within the time period under consideration.

10.1.2.1 Conclusion of substitutability test

It is unlikely that there will be effective substitutes for BTC's mobile access within the period under consideration that would make a non-transitory 5-10% price rise unprofitable for BTC. Therefore URCA proceeds to apply the EU three criteria test to this product to assess whether it is susceptible to *ex ante* regulation and therefore belongs in the high level SMP market.

10.1.3 EU three criteria test

10.1.3.1 Barriers to entry

The mobile voice market is characterised by very high barriers to entry. As mentioned above BTC's exclusivity in mobile voice will remain in force until two years after the sale of shares in BTC to a private investor. For this reason competitive entry in mobile voice is not possible within 12-24 months.

This means that the product should be passed through to the next stage of the three stage test.

10.1.3.2 Emergent competition at the retail level

For reasons stated above, URCA does not believe that there will be emerging competition at the retail level during the period covered by this review.

10.1.3.3 Sufficiency of *ex post* competition law

URCA has considered whether the possibility of *ex post* competition law to tackle abuse of an SMP position would be sufficient deterrent to address the market failures.

Ex post competition law is designed to protect the consumer from the abuse of an operator's position in markets where competition exists. Due to BTC's exclusivity in mobile voice services, which will persist until two years after the sale of a majority of the ownership to a strategic partner, competition will not be able to develop in this market.

Hence, in the interests of protecting the consumer, URCA does not consider that *ex-post* competition law measures on their own would be sufficient to address potential problems arising from abuse of market power in this area.

10.1.3.4 **Conclusion of EU three criteria test**

Based on the analysis above, URCA concludes that the provision of mobile access is a product susceptible to *ex-ante* regulation.

10.1.4 **Geographic reach**

BTC provides mobile access throughout The Bahamas. This therefore represents the geographic reach for the regulation of BTC's provision of mobile access.

The table below summarises the SSNIP test and EU three criteria test for mobile access.

SSNIP test results for mobile access

	Possible Substitutes				
	Fixed Wireless Access and Local Calling	Fixed Wire Line Access and Local	Voice over Internet	Voice over Internet	Public Payphones
	SRG	**BTC**	**International Vol Providers**	**BTC and SRG**	**BTC and SRG**
Characteristics					
Medium QoS	●●●	●●●	●●	●●	●●●
"Cell to cell handover" i.e. mobility					
Direct dialling	●●●	●●●	●●●	●●●	●●●
Make/receive calls anywhere, including overseas			●●	●●	●
Two-way communication in real time	●●●	●●●	●●●	●●●	●●●
Personalise number to individual					
Access to data services			●●	●●	
Ability to call emergency numbers and/or directory information services	●●●	●●●		●	●●●
Ability to use either pre-paid or post-paid	●	●			
Available for use by both business and residential consumers		●●●	●●	●●●	●
Prices	●●●	●●●	●●●	●●●	●●●
Coverage	●	●●●	●●	●●	●●
Likely to be an effective substitute within the time period under	N	N	N	N	N

review?					

EU three criteria test results for mobile access

Criteria	Present?
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Key:

Note for the SSNIP test: when assessing the characteristics, pricing and coverage of the substitutes, BTC's mobile access product has been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on, see key below). The review of future products made use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

●●●	Demonstrates the criteria to the greater or equal degree as BTC
●●	Adequately demonstrates the criteria compared to BTC
●	Poorly demonstrates the criteria compared to BTC
-	Does not demonstrate the characteristic
?	Insufficient information available to URCA
Italics	Used for products not currently available in The Bahamas

10.2 Local, Domestic Long Distance and International Long Distance Mobile Calling

These products have first been tested for substitutability, in accordance with Step 2 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution.

As the characteristics demonstrated by BTC's local, DLD and ILD mobile calling products are the same, URCA have reviewed these collectively in the following analysis.

10.2.1 Demand-side substitution for local, DLD and ILD mobile calling

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for local, DLD or ILD mobile calling by 5-10% for a non-transitory period of time. Would the price increase be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: Fixed wireless service (SRG), BTC's fixed wire line calling, IndiGO prepaid calling cards (SRG), Voice over Internet (BTC, SRG, International VoI Providers), Public payphones.

SRG's Fixed Wireless Service

In response to a 5-10% increase in the price of BTC's DLD and ILD mobile calling, customers have the option to switch to an SRG fixed wireless service.

Characteristics

SRG fixed wireless has very few of the characteristics of local, DLD and ILD mobile calling. Two of the main differences of the service are that it does not allow mobility and it is only available to businesses customers, and therefore cannot serve as a substitute for most customers. This and other shortcomings make SRG's fixed wireless service a poor substitute for BTC's mobile calling.

Price

SRG's prices for DLD and ILD calls are generally lower than BTC's prices for mobile, although not by a substantial amount. URCA believe that following a 5-10% increase in the price of BTC's mobile calling a small proportion of business consumers may switch to SRG's fixed wireless, however this is unlikely to be sufficient to make SRG an effective substitute for the reasons discussed above.

Coverage

SRG's coverage is limited to the major islands of New Providence, Grand Bahama, and Abaco. Accordingly, URCA considers that this service is unlikely to be a viable substitute for BTC's mobile calling.

➔ URCA believes that SRG's fixed wireless service is not an effective substitute to BTC's local, DLD and ILD mobile calling because it does not offer mobility and because of its limited coverage. URCA believes that this product is unlikely to constrain BTC's ability to profitably raise its prices by 5-10% as the majority of the population would not be able to switch to it.

BTC Fixed Service

In response to a 5-10% increase in the price of BTC's mobile calling, mobile customers could switch to a BTC fixed calling.

Characteristics

BTC's DLD fixed calling and BTC's mobile calling have several similar characteristics. However, the service is only available at a fixed location, as it does not possess the characteristic of mobility it is not possible for the customer to make and receive calls whilst away from home or the office.

Price

Prices for BTC's fixed calling service are generally lower than BTC's local, DLD and ILD mobile calling services (not taking into account the requirement for monthly rental charges). URCA believes that following a 5-10% increase in the price of BTC's mobile calling a small proportion of consumers may switch to using BTC's fixed service, however this is unlikely to be a sufficient number to make BTC's fixed calling services an effective substitute.

Coverage

BTC's fixed network has near complete coverage of The Bahamas. Thus, customers are able to make and receive calls from anywhere in The Bahamas. As such, URCA considers that network coverage within The Bahamas would not be a barrier to substitution.

➔ URCA believes that BTC's fixed service is unlikely to be an effective substitute for BTC's mobile calling. BTC's fixed service lacks a number of characteristics which may make customers less inclined to switch. URCA does not consider that a substantial number of subscribers to BTC's mobile calling would switch to BTC's fixed service were mobile prices to be increased by 5-10% for a non-transitory period of time.

SRG Prepaid Calling Card

In response to a 5-10% increase in the price of BTC mobile calling, mobile customers could switch to a BTC fixed calling.

Characteristics

SRG's prepaid calling card has some of the same characteristics as the BTC mobile calling service. However, they cannot provide direct dialling, meaning that the user must use two-stage dialling by entering a PIN code before dialling the telephone number they wish to reach. Additionally, whilst they can be used at more than one location they do not allow for mobility in the sense of 'cell-to-cell' handover which means calling cards would not be considered by most consumers as an effective substitute.

Price

Prices are lower than BTC's mobile rates therefore URCA do not believe that price would be a barrier to switching.

Coverage

The SRG calling cards can be used to make calls from any touch tone phone, including payphones, and BTC's fixed and mobile phones hence URCA do not believe that coverage would be a substantial barrier to switching for consumers.

➔ Based on the evidence available, despite the service being available via BTC's mobile phones, URCA believes that, primarily due to the two-stage dialling and the need to have a card with credit whenever the user wants to make a call, SRG prepaid calling cards are unlikely to be an effective substitute for BTC's local, DLD and ILD mobile service. URCA therefore concludes that this product would not constrain BTC's ability to profitably raise its prices by 5-10%.

VoI (BTC, SRG), International VoI Providers and Public Payphones

The comparison of characteristics, price and coverage are the same for these products as it was for BTC's mobile access hence the analysis has not been repeated here and Section 6.1.1 should be referenced.

➔ Based on the evidence available, URCA believes that VoI services and public payphones are unlikely to be effective substitutes for BTC's mobile calling services in the time period under consideration. URCA therefore concludes that these products would not constrain BTC's ability to profitably raise its prices by 5-10%.

10.2.2 **Supply-side substitution for local, DLD and ILD mobile calling**

URCA has considered whether a 5-10% non-transitory increase in the price of BTC's local, DLD and ILD mobile calling would likely lead to a change in the supply of services, either from new suppliers entering the market or a change in the nature of current provision.

As previously stated, due to the exclusivity BTC has in the provision of mobile voice services, another operator would not be able to enter this market until after the exclusivity has expired. The main shortcoming of the potential substitutes described above is the lack of true mobility (cell-to-cell handover) and as this cannot be replicated due to BTC exclusivity no supply-side substitution is likely to be possible in the period considered.

➔Having regard to current regulatory or legal stipulations, URCA considers there will not be effective supply-side substitutes for BTC's local, DLD and ILD mobile calling service within the time period under consideration.

10.2.2.1 **Conclusion of substitutability test**

The SSNIP test found that it is unlikely that there will be effective substitutes for BTC's mobile calling within the period under consideration that would make a non-transitory 5-10% price rise unprofitable for BTC. Therefore URCA proceeds to apply the EU three criteria test to this product to assess whether the product is susceptible to *ex ante* regulation and therefore belongs in the high level SMP market.

10.2.3 **EU three criteria test**

10.2.3.1 **Barriers to entry**

BTC's exclusivity in mobile voice will remain in force until two years after the sale of shares in BTC to a strategic partner. For this reason competitive entry in mobile voice is not possible within 12-24 months.

This means that the product should be passed through to the next stage of the three stage test.

10.2.3.2 **Emergent competition at the retail level**

For reasons stated above, URCA does not consider the market as having emergent competition at the retail level in the period covered by this review.

10.2.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether the possibility of *ex post* competition law to tackle abuse of an SMP position would be sufficient deterrent to address the market failures.

Ex post competition law is designed to protect the consumer from the abuse of an operator's position in markets where competition exists. Due to BTC's exclusivity in mobile voice services, which will persist until two years after the sale of a majority of the ownership to a strategic partner, competition will not be able to develop in this market.

Hence, in the interests of protecting the consumer, URCA does not consider that *ex-post* competition law measures on their own would be sufficient to address potential problems arising from abuse of market power in this area.

10.2.3.4 **Conclusion of EU three criteria test**

None of the three criteria were met for BTC's mobile calling. Therefore the conclusion of the EU three criteria test is that this product is susceptible to *ex ante* regulation and belongs in the relevant market.

10.2.4 **Geographic reach**

BTC provides mobile calling throughout The Bahamas. This therefore represents the geographic reach for the regulation of BTC's provision of mobile calling.

SSNIP test results for local, DLD and ILD mobile calling

	Possible Substitutes					
	Fixed Wireless Service	Fixed Wire Line Service	Prepaid Calling Cards	Voice over Internet	Voice over Internet	Public Payphones
	SRG	**BTC**	**SRG**	**International Vol Providers**	**BTC and SRG**	**BTC and SRG**
Characteristics						
Medium QoS	●●●	●●●	●●●	●●	●●	●●●
"Cell to cell handover"						
Direct dialling	●●●	●●●		●●●	●●●	●●●
Make and/or receive calls anywhere, including overseas	●	●●●	●●	●●	●●	●●
Two-way communication in real time	●●●	●●●	●●●	●●●	●●●	●●●
Available for use by both business and residential consumers						
Price	●●●	●●●	●●●	●●●	●●●	●●●
Coverage	●	●●●	●●●	●●	●●	●●
Likely to be an effective substitute within the time period under review?	N	N	N	N	N	N

EU three criteria test results for local, DLD and ILD mobile calling

Criteria	**Present?**
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Key:

Please reference summary table for mobile access.

Note for the SSNIP test: when assessing the characteristics, pricing and coverage of the substitutes, BTC's local, DLD and LID mobile calling product have been used as the

benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of URCA's knowledge of the market and operators, the experience of other countries and any other relevant evidence available to URCA.

10.3 Mobile Data

The products have first been tested for substitutability, in accordance with Step 2 of the Methodology. They were tested first for demand-side substitution and then for supply-side substitution.

10.3.1 **Demand-side substitution for mobile data services**

The demand-side SSNIP test asks what would happen to demand over a 12-24 month period were BTC to increase its prices for mobile data by 5-10% for a non-transitory period of time. Would this be profitable to BTC or not?

URCA has considered demand-side substitution from a number of sources:

- Current products: Voice over Internet (BTC, SRG and International VoI providers)

Voice over Internet

Characteristics

As demonstrated by the summary table at the end of this Section, VoI providers are able to match some of the characteristics of BTC's mobile data service. The key differential is that the VoI service does not demonstrate mobility in the sense of 'cell-to-cell' handover and hence would not be available to consumers whilst on the move. Additionally, whilst VoI can offer some of the services of mobile data it is unable to provide them to the same level of quality of service experienced by consumers using BTC's mobile data.

Price

The majority of VoI providers over these data services 'free' of charge except for the monthly rental charge. URCA does not have the relevant information with regards to the price of the full range of BTC's mobile data services, however it does not believe that price would be a significant barrier to switching to a VoI provider for this service. However, VoI services do require a broadband connection and the associated charges (such as a monthly rental charge) may be a barrier to switching for some mobile data users, in particular pre-paid users.

Coverage

VoI services can be accessed anywhere in The Bahamas and overseas where there is broadband access. URCA does not believe that coverage would be a barrier to switching to a VoI provider.

➔ Based on the evidence available, URCA believes that international VoI providers are unlikely to be effective substitutes for BTC's mobile data services. URCA therefore concludes that these products would not constrain BTC's ability to profitably raise its prices by 5-10%.

10.3.2 **Supply-side substitution for mobile data**

URCA has considered whether a 5-10% non-transitory increase in the price of BTC mobile data would likely lead to a change in the supply of services, either from new suppliers entering the market or a change in the nature of current provision.

As previously stated, BTC has exclusivity in the provision of mobile voice services (but not mobile data services) for a period of two years after the sale of the majority of the ownership to a private investor. An alternative operator, other than SRG, wishing to offer mobile data services would be unable to provide an effective substitute as they would not be able to compete in the area of mobility, which is a key characteristic of mobile data. SRG is currently authorized to provide mobile data services, and whilst SRG's services are currently nomadic in nature, it could conceivably develop a mobile data service in the future. Despite this capability, SRG has not demonstrated the intention to actually provide such a service in the period covered by this review.

➔URCA considers there will not be effective supply-side substitutes for BTC's mobile data service within the time period under consideration.

10.3.2.1 **Conclusion of substitutability test**

The SSNIP test found that it is unlikely that there will be effective substitutes for BTC's mobile data services within the period under consideration that would make a non-transitory 5-10% price rise unprofitable for BTC. Therefore URCA proceeds to apply the EU three criteria test to this product to assess whether the product is susceptible to *ex ante* regulation and therefore belongs in the high level SMP market.

10.3.3 **EU three criteria test**

10.3.3.1 **Barriers to entry**

BTC's exclusivity in mobile will remain in force until two years after the sale of shares in BTC to a strategic partner. For this reason competitive entry in mobile voice is not possible within 12-24 months.

This means that the product should be passed through to the next stage of the three stage test.

10.3.3.2 **Emergent competition at the retail level**

For reasons stated above, URCA does not consider the market as having emergent competition at the retail level in the period covered by this review.

10.3.3.3 **Sufficiency of *ex post* competition law**

URCA has considered whether the possibility of *ex post* competition law to tackle abuse of an SMP position would be sufficient deterrent to address the market failures.

Ex post competition law is designed to protect the consumer from the abuse of an operator's position in markets where competition exists. Due to BTC's exclusivity in mobile voice services, which will persist until two years after the sale of a majority of the ownership to a strategic partner, competition will not be able to develop in this market.

Hence, in the interests of protecting the consumer, URCA does not consider that *ex-post* competition law measures on their own would be sufficient to address potential problems arising from abuse of market power in this area.

10.3.3.4 **Conclusion of EU three criteria test**

None of the three criteria were met for BTC's mobile data services. Therefore the conclusion of the EU three criteria test is that this product is susceptible to *ex ante* regulation and belongs in the relevant market.

10.3.4 **Geographic reach**

BTC provides mobile data services throughout The Bahamas. This therefore represents the geographic reach for the regulation of BTC's provision of mobile data services.

SSNIP test results for mobile data services

	Possible Substitutes
	Voice over Internet
	BTC, SRG and International VoI Providers
Characteristics	
Medium QoS	●●
"Cell to cell handover"	
Ability to send/receive SMS/MMS and access the internet whilst travelling within and outside of The Bahamas	●●●
Two way communication	●●●
Available for use by both business and residential consumers	●●●
Price	●●
Coverage	●●●
Likely to be an effective substitute within the time period under review?	N

EU three criteria test results for mobile data services

Criteria	**Present?**
Low barriers to entry	N
Emergent competition at the retail level	N
Sufficiency of ex post competition law	N
Susceptible to ex ante regulation?	Y

Key:

Please reference the summary table for mobile access.

Note for the SSNIP test: when assessing the characteristics, pricing and coverage of the substitutes, BTC's mobile data services have been used as the benchmark. When a criterion is demonstrated to a greater or equal degree as BTC, URCA indicates this with a mark of three (and so on). The review of future products makes use of URCA's knowledge of the

market and operators, the experience of other countries and any other relevant evidence available to URCA.

10.4 Conclusion on retail products in the high-level SMP market

Following the analysis of the demand- and supply-side substitutability of the retail products and EU three criteria tests applied above, URCA has concluded that the following products should remain in the high-level SMP market for BTC:

1. Mobile access

2. Local mobile calling

3. Domestic and international long distance mobile calling

4. Mobile data services

11 Description of wholesale products

In accordance with the Methodology, in this Section URCA would normally identify the underlying wholesale products and interfaces which enable BTC to offer the retail products included in the high level SMP market. This would include wholesale products that BTC would need to offer other providers to allow them to compete in the retail market, as well as those products that it effectively provides to its own retail business today.

To allow URCA to conduct the substitutability analysis, possible substitutes for these wholesale products from other operators need to be identified.

However, BTC has exclusivity for the provision of mobile voice services (and thus the underlying mobile network to support the mobile access and data services as well) for two years from the date when shares in BTC are sold to a private investor. Consequently it is not possible for any other operators to offer substitutes for mobile wholesale services, nor will there be a need for BTC to offer such products and services to competitors in the 12-24 month period considered in this review.

Therefore, URCA has not reviewed the potential wholesale products and services which could be made available by BTC to support the provision of mobile access, calling and data services. URCA intends to undertake a full market review for mobile services in preparation for the introduction of competition to the mobile voice market. This will ensure that any new market entrants will have the access to wholesale services from BTC found to be necessary by URCA to support the provision of mobile services.

Despite there being no formal analysis of the mobile wholesale products in the high level SMP market, it is clear that BTC will need to provide a call termination service for calls from a fixed network subscriber (whether connected to BTC or another fixed provider) to a customer connected to BTC's mobile network.

Given URCA's emphasis on applying only the minimum regulation necessary in respect of the presumptions of SMP, URCA considers that it is not necessary at this stage to mandate that BTC offers direct interconnection to its mobile network. Therefore BTC must provide a transit service via its fixed network for the termination of calls on its mobile network.

BTC's retail charging for calls from fixed lines to mobile lines employs the principle that the receiving (mobile) customer pays to receive the call. URCA's general charging principle is that if a provider charges its retail customers for receiving calls, then that provider should not also be able to charge other provides for the termination of such calls. Therefore URCA would expect BTC to charge other providers (and itself) only for the transit product. BTC should therefore include in its RAIO a product for transit calls to mobile.

Appendix 3 – Proposed Types of Obligations for the Fixed Voice and the Mobile Voice and Mobile Data high level markets

12 Types of obligations to be imposed on BTC

In the sections preceding, the products in the high-level SMP market for BTC have been identified. The portfolio of products in the high-level SMP market for BTC is found to be:

Retail

- Fixed telephony access and local calling
- Domestic Long Distance (DLD) fixed calling and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling
- Broadband internet access
- National leased lines
- International leased lines
- Mobile access
- Local mobile calling
- Domestic Long Distance (DLD) mobile calling
- International Long Distance (ILD) mobile calling
- Mobile data

Wholesale

- Call transit (domestic and international)
- Call termination services[128] (domestic and international)
- Wholesale national backhaul
- Wholesale international backhaul
- Wholesale national Leased Lines
- Wholesale international Leased Lines
- Wholesale directory enquiry and ancillary services
- Bitstream service
- National Backhaul
- International Backhaul

URCA concluded that the following products should be excluded from the high-level SMP market:

Retail

- Voice over Internet
- Public Payphones

Wholesale

- Call origination
- Unbundled local loop
- Wholesale line rental

[128] This includes call termination, termination of emergency calls to the police, termination of automated ancillary services, termination of calls to freephone numbers, termination of calls to operator assistance facilities and termination of calls to directory enquiries.

- Origination of calls to freephone numbers
- Access to the directory enquiries database

In accordance with the Methodology, when products have been identified as remaining in the high-level SMP market, appropriate *ex ante* remedies should be applied. Any remedies selected by URCA will be driven by the objectives of:

- Promoting competition,
- Proportionality,
- Contributing to the development of sustainable competition, and
- Promoting the interest of persons in The Bahamas.

For those products in the high level SMP market, URCA reviewed possible obligations which could be applied to BTC to meet these objectives. URCA then limited the number of obligations to impose in order to be proportional in its approach.

12.1 Standard SMP Obligations

The obligations listed below are not discretionary and they will be applied for all products found to remain in the high-level SMP markets.

- For all SMP products
    - Non-discrimination
- For all retail SMP products
    - Requirement to publish charges and terms and conditions
    - Consumer protection

12.2 Specific SMP Obligations

The specific SMP obligations that BTC must adhere to are as follows:

Table of specific obligations

#	Retail/ Wholesale	Product	Retail/Wholesale Obligations to be applied	Deadlines	Charging principle
1	Retail	Fixed telephony access and local calling	Retail price regulation*	Immediate	
2	Retail	Domestic Long Distance (DLD) fixed calling and domestic fixed calls to rated numbers	Retail price regulation*	Immediate	
3	Retail	International Long Distance (ILD) fixed calling	Retail price regulation*	Immediate	
4	Retail	Broadband Internet access in specified areas[129]	Retail price regulation*	Immediate	
5	Retail	National Leased Lines	No regulation	None	
6	Retail	International Leased Lines	No regulation	None	
7	Retail	Mobile access	Retail price regulation*	Immediate	
8	Retail	Local mobile calling	Retail price regulation*	Immediate	
9	Retail	Domestic Long Distance (DLD) mobile calling	Retail price regulation*	Immediate	
10	Retail	International Long Distance (ILD) mobile calling	Retail price regulation*	Immediate	
11	Retail	Incoming international calls to mobile customers	Compliance with retail price regulation Removal of charges to customers	Immediate 2 months	
12	Retail	Mobile data	Retail price regulation*	Immediate	
The wholesale section only refers to the fixed voice* and data market**					
13	Wholesale	Call transit (domestic and international and mobile)	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
14	Wholesale	Call termination services****(domestic and international)	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
15	Wholesale	Wholesale national backhaul	Include in published	2 months from final determination	Cost oriented

[129] Areas which are not covered by CBL's network.

			reference offer**	by URCA	
16	Wholesale	Wholesale international backhaul	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
17	Wholesale	National leased lines	No regulation		
18	Wholesale	International Leased Lines	No regulation		
19	Wholesale	Wholesale directory enquiry and ancillary services (call termination and service provision)	Include in published reference offer**	2 months from final determination by URCA	Cost oriented
20	Wholesale	Bitstream service	Include in published reference offer**	2 months from final determination by URCA	Cost oriented

* BTC shall comply with URCA's specific requirements for the retail prices for these products and for related products as URCA may require from time to time. URCA's requirements for retail pricing are set out below.

** BTC shall produce a reference offer for interconnection and access to its network for the products specified above and any additional enabling products that a wholesale customer may reasonably require in order to make use of the products listed. Such enabling products include joining circuits, points of interconnection and data management amendments. URCA's requirements for the reference access and interconnection offer are set out in the Access and Interconnection guidelines. Definitions of the enabling components to be included are set out below.

***Including transit and termination to mobile network.

**** This includes call termination, termination of emergency calls to the police, termination of automated ancillary services, termination of calls to freephone numbers, termination of calls to operator assistance facilities

Despite national and international leased lines remaining within the relevant high-level SMP market, URCA considers that it is possible that CBL would compete with BTC in the provision of these services. URCA retains its rights to mandate the introduction of retail price regulation for national and international leased lines in the future should it consider this to be necessary. URCA will observe the developments in the leased lines market and any future decisions to impose retail price regulation will take into account the behaviour of BTC and CBL in the market.

Accounting Separation and Cost Accounting

Accounting separation and cost accounting are complex areas and can be achieved at different levels of complexity. URCA is proposing that BTC shall implement separated accounts based on fully allocated historic costs, in accordance with the guidelines issued by URCA.

The minimum set of retail services for which separate accounts should be prepared has to include:

Fixed Network Retail Services:

- Fixed telephony access
- Local calling - fixed to fixed

- Fixed to mobile calling
- Domestic Long Distance (DLD) fixed calling and domestic fixed calls to rated numbers
- International Long Distance (ILD) fixed calling
- Broadband Internet access
- National Leased Lines
- International Leased Lines
- Remainder of fixed network services (not captured in the above categories)

Mobile Network Retail Services:

- Mobile access
- Local mobile calling
- Domestic Long Distance (DLD) mobile calling
- International Long Distance (ILD) mobile calling
- Mobile data
- Remainder of mobile retail services (not captured in the above categories)

The following list shows a minimum set of wholesale services for which separated accounts shall be reported:

Fixed Network Wholesale Services:

- Call transit
    - domestic
    - international
- Call termination services[130]
    - domestic
    - international
- Remainder of wholesale voice services (all voice services not captured in transit or termination services above)
- Wholesale national backhaul
- Wholesale international backhaul
- National leased lines
- International Leased Lines
- Remainder of wholesale transmission services (services not captured in backhaul or leased line reports above)
- Wholesale directory enquiry and ancillary services (call termination and service provision)
- Bitstream service
- Local Access Loops

[130] This includes call termination, termination of emergency calls to the police, termination of automated ancillary services, termination of calls to freephone numbers, termination of calls to operator assistance facilities and termination of calls to directory enquiries.

- Remainder of wholesale access services

Mobile Network Wholesale Services:

- Mobile voice call termination
- Mobile voice call origination
- Mobile on-net voice calls
- Remainder of mobile voice services (e.g. voicemail calls, customer service calls, bill inquiries, etc)
- SMS termination
- Remainder of mobile messaging and data services

For the initial reporting under these guidelines, BTC must submit separated accounts for 2008 within three months of the publication of the Final Determination. These accounts may be unaudited and unpublished so that BTC may use 2008 as a "test" year.

For 2009 and each subsequent year, BTC must submit audited, separated accounts within six months of the end of their financial year.

Further, URCA proposes that BTC shall calculate cost-oriented prices for the products to be included in the reference offer and for which cost-oriented pricing is required. Cost-orientedprices shall be based on the separated accounts.

For products where the pricing principle of 'retail minus' applies, URCA requires BTC to calculate its avoidable retail costs based on the separated accounts and use these to set the prices.

The form of separated accounts and cost oriented prices proposed is the simplest version used by regulators and represents URCA's intention to regulate with a light touch and to achieve results as quickly as possible for the benefit of consumers and the country as a whole.

12.2.1 **Reference Offer for Access and Interconnection**

The establishment of reference offers is considered the most critical fundamental building block for the introduction of competition in the electronic communications sector.

The consultation document issued in June 2009 on the potential contents of a reference access and interconnection offer (RAIO) discusses many of the services that regulators around the world have considered necessary to enable competition and prevent the abuse of control of critical infrastructure or interfaces. URCA believes that at a minimum the following contents should be included:

- Specification of services and facilities offered for access and interconnection;

- Charges for access and interconnection services and facilities;

- Technical requirements including Joint Working Manual, Operations & Maintenance Manual;

- Information exchange;

- Procedures (pre- and post- agreement);

- Processes to support the setting up of the RAIO including processes for the forecasting, ordering, installation, maintenance, repair and billing of the RAIO services; and

- Service Level Agreements (SLAs) for the forecasting, ordering, installation, maintenance, repair and billing and quality of service parameters for the RAIO services including penalties for failing to meet SLAs.

The components to be included are:

- Called based interconnection: call termination, call origination, call transit, incoming international calls, outgoing international calls, emergency call termination, mobile termination, mobile origination

- Indirect access: call origination – carrier pre-selection, call origination – carrier selection, call origination – carrier pre-selection with call-by-call override

- Connectivity based interconnection products: leased circuits, joining circuits, points of interconnection (POIs)

- Wholesale Broadband Access: broadband resale service, broadband bitstream Access

- Access to the local loop: unbundled access to the local loop – full local loop unbundling, unbundled access to the local loop – sub-loop unbundling, unbundled access to the local loop – shared access

- Backhaul (national and international)

- Facility sharing / Co-location

- Ancillary services: Directory assistance information

URCA is conscious that some of the components listed above may be time-consuming and costly to implement and it wishes to apply regulatory obligations only where it considers these to be proportionate to the benefits they are likely to generate. Further, given that the interim SMP presumptions are intended to create a transition framework and that comprehensive market reviews will be conducted in the following years, URCA has erred on the side of caution about whether to impose obligations. This will provide a period of time where SMP Licensees may be regulated more lightly than would otherwise have been the case and thus provide URCA with the opportunity to observe the behaviour of the SMP Licensee. Such behaviour will be an important input to future decisions by URCA on whether heavier regulation is required.

URCA therefore proposes to include only the following components in BTC's RAIO:

- bitstream for broadband internet
- basic voice services including all termination and transit services,
- national backhaul
- international backhaul
- enabling components including leased circuits, joining circuits, points of interconnection and data management amendments

Despite national and international leased lines also remaining within the relevant high-level SMP market, URCA considers that it is possible that CBL could compete with BTC in the provision of these services. URCA retains its rights to mandate the introduction of leased lines into the RAIO in the future should it consider this to be necessary. In the meantime, URCA will encourage BTC to enter into negotiations with potential wholesale customers for national and international leased lines and will monitor the progress of such negotiations. The success of commercial negotiations will be a significant contribution to URCA's future decision regarding whether to include leased lines in future RAIOs.

12.2.2 **Retail Price Regulation**

BTC is deemed immediately compliant with the Retail Price Regulation obligations, and shall act in accordance with the framework set out below in order to remain so.

The detailed framework and obligations are specified in the following sections.

12.2.2.1 **Filing of Initial Tariffs/Prices**

Within 30 days of URCA issuing the SMP operator with the Final Determination and Final Order of its obligations[131], the operator shall file with URCA its existing tariffs/prices of each retail product and service subject to retail price regulation (see the table of specific obligations above, henceforth these services are referred to as "Price Regulated Services") and the terms and conditions upon which those services are provided. Where the product or service is offered as part of a bundle with other products or services, or is tied to other products or services, the bundled/tied prices should be provided as well.

The SMP operator shall at the same time file with URCA the volume of sales (number of subscribers, traffic volumes) and revenues relating to each Price Regulated Service for the previous two financial years, or such period as the service has been provided for if less than two years.

12.2.2.2 **Investigations**

In exercise of its powers to conduct inquiries or investigations under s. 8(1)(j) of the Comms Act, URCA reserves the right to conduct an investigation into an SMP operator's prices and terms and conditions for a Price Regulated Service on its own motion, without receiving a complaint from another party.

Under the terms of s. 9 of the Comms Act, URCA may request that the SMP operator provide information to URCA during any such investigation. URCA shall state the purpose of the request, specify the information required and specify the time period within which the information is to be provided. Failure to provide timely and accurate information may lead to the imposition of a fine.

12.2.2.3 **Tariff/Price Changes**

The following terms shall apply to both price increases and decreases.

The SMP operator shall not change the tariff/price of any Price Regulated Service without the prior written approval of URCA.

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[131] If these are issued separately, the 30 day period applies from the date of the later issue.

The SMP operator shall submit to URCA an application for a tariff or price change, as appropriate, at least 30 days before the proposed effective date of the change.

Such application shall include:

- A description of the product or service for which the price change is being requested;
- Proposed effective date for the price change;
- Current tariffs/prices;
- Proposed tariffs/prices;
- Any proposed changes to the applicable terms and conditions that will result from the price change;
- Commercial rationale for making the proposed change;
- Pricing principle applied in developing the proposed price (cost-oriented, market pricing, etc.);
- Data relevant to the proposed change, including the following:
    - Volume of demand;
        - Number of existing subscribers or users that would be affected by the proposed tariff change;
        - Size of overall market/market share of the SMP operator;
    - Relevant revenues for the service;
    - Pricing of communications inputs to the service;
    - Volume of communications service inputs;
    - Costs of communications inputs for the service;
    - Direct costs of the service including capital costs and operating expenditures (e.g. network components and marketing costs);
    - Estimate of the incremental indirect costs of the service;
    - Total cost of the service; and
    - Estimates of the incremental Profit and Loss and Cash Flow resulting from the service; and
- The effect of the proposed tariff change on the SMP operator's regulated rate of return.

Where possible, this data should be provided in accordance with the Accounting Separation and Cost Accounting Guidelines issued by URCA. URCA reserves the right to request additional information from the SMP operator relating to the proposed tariff change.

In the absence of costing information in accordance with the Accounting Separation and Cost Accounting Guidelines, the SMP operator may provide URCA with other information to support its proposed price change including:

- Benchmark study of prices in comparable jurisdictions along with supporting information;

- Verifiable financial management information in respect of providing the service.

The SMP operator must submit a declaration signed by an authorised officer confirming that the proposed price decrease is not anticompetitive and, in particular, that the proposed price decrease:

- does not result in predatory pricing[132];

- does not entail an unfair cross-subsidy[133]; and

- will not result in a margin squeeze[134] on other operators.

To the extent possible, this declaration should be supported with evidence, which should also be provided to URCA.

The SMP operator must submit a declaration signed by an authorised officer confirming that its application is in accordance with this Order, the Comms Act, its operating licence, the Sector Policy and any other relevant documents.

Based on the information provided to it, URCA may state that it has no objections to the proposed tariff/price changes or may block or propose suitable amendments to any tariff/price change for a Price Regulated Service.

URCA shall review an application for a tariff/price change as follows:

a. Within 30 days of receipt of a completed application (all information is provided in accordance with the requirements of this Section), URCA shall respond with one of the following:

    - A statement of no objection;

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[132] This may occur when services are provided by the SMP operator at prices below cost so as to foreclose or be likely to foreclose actual or potential competitors. This can result in competitors being driven out of business, thereby increasing prices to uncompetitive levels in the long run.

[133] This may occur when an SMP operator allocates all or part of the costs of an activity in one geographical or product market to an activity in another geographical or product market.

[134] This may occur when a vertically integrated SMP operator in the upstream market charges a price for the product on the upstream market which, compared with the price it charges on the downstream market, would prevent an equally efficient competitor from trading profitably in that downstream market on a lasting basis.

- A rejection of the application with reasons;

- A notice that the application will go to public consultation and that therefore a final decision is withheld for the time being. URCA will consider whether there would be a need for public consultation based on factors such as the expected impact of the price change, in terms of number of customers affected; possible alternative products available to customers; revenue impact on the operator and expected impact on competition in the market place.

b. If a notice that the application must go to public consultation is issued, as soon as practicable URCA will allow the public a minimum of 30 days to respond to the consultation, unless otherwise stated by URCA; and

c. Within 30 days of the close of the public consultation, URCA will publish a final decision.

12.2.2.4 **Special Offers or Discounts ("Special Promotions")**

Special Promotions for Price Regulated Services shall only be offered with the written consent or approval of URCA.

The SMP operator shall submit to URCA an application for any Special Promotion with a full description of the Special Promotion, including:

- the information required under Section 12.2.2.3 as they relate to the Special Promotions and the normal rates for the relevant Price Regulated Service;

- the rates applicable to the Special Promotion;

- the period of duration of the Special Promotion; and

- the terms and conditions applicable thereto.

URCA will review the submission for Special Promotions and notify the SMP operator of its decision, to not object to, or to block or propose amendments to a Special Promotion, within 10 working days of receipt of the submission. URCA may allow the Special Promotion for a trial period of 30 days before a final decision is issued.

A Special Promotion must cease within 90 days of the launch date.

A Special Promotion should not be similar to a Special Promotion that was available from the SMP operator at any time within the previous 120 days.

URCA may block a Special Promotion that is unlikely to be:

- transparent, non-discriminatory and objectively justifiable; or

- would have the effect of lessening competition in a relevant market.

A Special Promotion must be launched no later than 30 days from the date of URCA's written approval; otherwise the Special Promotion must be resubmitted for approval.

The SMP operator shall notify URCA in writing no less than 5 working days prior to the launch date of the Special Promotion.

The SMP operator shall for a period of 180 days maintain all relevant traffic data, revenue and marketing records pertaining to a Special Promotion and must provide these to URCA upon request.

Following a statement of no objection from URCA and prior to market introduction, the SMP operator shall publish in one or more newspapers with national circulation the eligibility criteria for any Special Promotion along with the permitted terms and conditions.

In some cases the operator may provide wholesale services which are used by other operators to compete with the operator in provision of the Price Regulated Service in question (for example, interconnection on a "retail minus" basis). In these cases, the operator must identify these and apply equivalent price decreases and associated changes to terms and conditions to the relevant wholesale services in such a manner that the competing operator could replicate the special promotion. Details of how the operator proposes to do this must be included in its submission.

12.2.2.5 **Bundling of Price Regulated Services**

The SMP operator may bundle, tie or offer new packages including price regulated services as long as each Price Regulated Service included in such a bundle, tied purchase or package is also available on a standalone basis on reasonable terms and conditions[135]. A bundle, tied products or package that includes at least one price regulated service shall be subject to retail price regulation. The SMP operator shall provide URCA with the costing information of each service included in the bundle, tied purchase or package and demonstrate to URCA that the price of the bundle is not anti-competitive and would not have the effect of lessening competition in a relevant market.

12.2.2.6 **Introduction of New Services**

An SMP operator that proposes to offer a new service shall at least 30 days before providing the new service file with URCA:

a. The proposed effective date for the introduction of the new service;

b. A description (commercial and technical) and name of the new service, including the tariffs/prices, terms and conditions applicable thereto; and

c. Data including a business plan with the details as listed in Section 12.2.2.3 to show that the price of the new service is transparent and non-discriminatory and would not have the effect of lessening competition in a relevant market.

[135] Bundling is the practice of forcing ('pure bundling'), or economically inducing ('mixed bundling'), customers to buy a 'bundle' consisting of two or more technically distinct products. Tying is the practice of making the purchase of one product or service conditional upon the purchase of another product or service.

A new service that is a combination of services comprising at least one Price Regulated Service is a Price Regulated Service.

The SMP operator shall not repackage an existing service as a new service. A new service must be materially different to existing services. If the new service is similar to an existing service, the SMP operator must explain the rationale for the launch of the new service.

URCA shall review an application to introduce a new service as follows:

a. Within 30 days of receipt of a completed (all information is provided in accordance with the submission requirements in this Section) application, URCA shall respond with one of the following:

   - A statement of no objection;
   - A rejection of the application with reasons;
   - A notice that the application will go to public consultation and that therefore a final decision is withheld for the time being. URCA will consider whether there would be a need for public consultation based on factors such as the expected impact of the proposed new service, in terms of number of potential customers; revenue impact on the operator and expected impact on competition in the market place.

b. If a notice that the application must go to public consultation is issued, as soon as practicable URCA will allow the public a minimum of 30 days to respond to the consultation, unless otherwise stated by URCA; and

c. Within 30 days of the close of the public consultation, URCA will publish a final decision.

12.2.2.7 **Withdrawal and Discontinuation of Price Regulated Services**

The SMP operator shall not withdraw (to existing customers) and/or discontinue (to new customers) the provision of a Price Regulated Service without the prior written approval of URCA.[136]

The SMP operator shall submit to URCA, no less than 90 days prior to the proposed effective date, its proposal to withdraw and/or discontinue the provision of a Price Regulated Service.

The proposal shall include information such as:

- number and profile of current customers/users,
- sales revenue,
- volume of demand and costs,

[136] For clarity, "withdraw" means to cease providing the service to existing or new customers. "Discontinue" means to cease offering the service to new customers whilst still providing it to existing customers.

- the proposed process to notify affected customers; and

- any proposed substitutes for the service.

Where appropriate this data should be provided for the last three (3) years, to allow URCA to assess the likely impact on the market of the withdrawal of the service.

URCA shall review an application to withdraw and/or discontinue a Price Regulated Service as follows:

a. Within 30 days of receipt of a completed (all information is provided in accordance with submission requirements in this Section) application, URCA shall respond with one of the following:

    - A statement of no objection;

    - A rejection of the application with reasons;

    - A notice that the application must go to public consultation as it may be of public significance. URCA will consider whether there would be a need for public consultation based on factors such as the expected impact of the withdrawal or discontinuation of the Price Regulated Service, in terms of number of customers affected; possible alternative products available to customers; revenue impact on the operator and expected impact on competition in the market place.

b. If a notice that the application must go to public consultation is issued, URCA will allow the public a minimum of 30 days to respond to the consultation unless otherwise stated by URCA; and

c. Within 30 days of the close of the public consultation, URCA will publish a final decision.

The SMP operator shall give its current users at least 60 days' notice of its decision to withdraw the provision of a Price Regulated Service. The SMP operator shall also publish, no less than 30 days from the effective date of the withdrawal or discontinuation, a notice of its decision to withdraw or discontinue the provision of a Price Regulated Service in one or more newspapers with national circulation.