



# **Final Statement of Results – Public Consultation on the Draft National Numbering Plan**

**ECS 16/2011**

**12 August 2011**

**UTILITIES REGULATION & COMPETITION AUTHORITY**

**UBS Annex Building, East Bay St | P.O. Box N-4860 Nassau, Bahamas | T 242. 393. 0234 | F 242. 393. 0153**

**[www.urcabahamas.bs](http://www.urcabahamas.bs)**

# Contents

|   |    |
|---|----|
| 1. Introduction.....                        | 3  |
| 2. General Comments.....                    | 4  |
| 3. Responses to Consultation Questions..... | 7  |
| 4. Next Steps and Way Forward .....         | 34 |

## 1. Introduction

The Utilities Regulation and Competition Authority (URCA), formed by the URCA Act, 2009 is the successor to the Public Utilities Commission (PUC) as the regulator of the electronic communications sector, pursuant to the passing of the Communications Act, 2009 (the Comms Act).

In May 2008, the PUC initiated a Consultation on a National Numbering Plan for The Bahamas. The Statement of Results for this process was delayed by the introduction of the URCA Act and Comms Act in 2009 when the regulatory regime was transitioned from the PUC to URCA.

On May 25, 2010, URCA continued work on the National Numbering Plan by the publication of the Statement of Results from the consultation commenced by the PUC, and the Draft Bahamas National Numbering Plan (NNP), and an invitation for further comments on the consultation questions posed by the PUC. URCA considered a second round of consultation to be necessary to afford stakeholders an opportunity to reconsider previous responses in light of the new regulatory framework.

At the close of the consultation process on 30 July 2010, URCA received responses from three companies:

- the Bahamas Telecommunications Company Limited (BTC);
- Cable Bahamas Limited (CBL); and
- Systems Resource Group (SRG).

The full text of the responses may be viewed and downloaded from URCA's website at [www.urcabahamas.bs](http://www.urcabahamas.bs). URCA thanks participants for their continuing engagement in the process of developing an effective regulatory framework for the electronic communications sector in The Bahamas.

URCA has now reviewed the responses to the second round of consultation and the Draft NNP and has today published this Final Statement of Results (ECS 16/2011) and the Final Bahamas National Numbering Plan (ECS 17/2011).

Interested persons are reminded that the Final Bahamas National Numbering Plan includes several Guidelines, which may be downloaded as separate documents.

## **2. General Comments**

The following general comments were made by respondents to the consultation.

### **Bahamas Telecommunications Company Ltd. (BTC).**

BTC stated that it believed that URCA was correct to place the interest of the end-user and the development of the telecommunications market as its primary objective. BTC believed that the Draft NNP was a practical document that would enable the industry to grow to the benefit of The Bahamas.

BTC noted that it did not attempt to provide a response to each of URCA's conclusions in the Result of the consultation initiated in 2008, rather BTC intended to only provide responses to those Questions in which it felt that the Draft NNP would benefit from further consideration.

BTC cited that as an example, that it did not provide a response to Question 12 that asked what type of new services or applications would impact the assignment of numbering resources causing an exhaust of the NPA. BTC noted while it agreed with URCA's proposal that the Central Office Code (CO Code) 555 should be used for information services, it was BTC's opinion that the Industry Numbering Committee (INC) guidelines for that code allowed for it to be used for Revenue Sharing Services. BTC noted the current use of numbering solutions to differentiate between the service needs of Premium Rate Services and Shared Revenue Services. Some countries used a numbering policy to distinguish between general content services and those related to "adult services".

BTC agreed with URCA that Number Portability was a significant subject that deserved its own consultation. BTC welcomed the consultation but was interested to see how URCA would achieve the balance between end-users benefits and the cost of providing number portability.

### **Cable Bahamas Limited (CBL)**

CBL indicated that the Draft NNP did not make any references to deal with service providers using Next Generation Networks (NGN). It noted that "increasing completion in telecom and subscriber's desire to have a new range of services" would require different naming, addressing and numbering systems. CBL believed that URCA should establish a "technology neutral numbering plan to allow for technological innovations, ENUM and number portability."

CBL went on to elaborate on the Telecommunications Sector Policy<sup>1</sup> and the BTC Privatization Committee Regulatory Framework for the Communications Sector in support of their opinion that Number Portability was necessary to promote competition. They also noted their response in the 2008 consultation on the Draft NNP for the implementation of number portability.

### **URCA's Comments**

URCA acknowledges the general responses from both BTC and CBL.

URCA is not aware of which of its statements contained “emotive responses” or “incorrect statements” as referred to by BTC and notes that BTC has not provided specific references which would have enabled URCA to address them. URCA will, however, seek to avoid any such responses as far as possible without having the specific references.

URCA notes BTC's comments regarding the CO Code 555 and interpretation of the INC guidelines. URCA will consider the appropriate guidelines, its own numbering policy in the NNP (ECS 17/2011) and other regulatory and licensing guidance documents if and when applications are received for any numbering resource.

URCA refers to the separate consultation on Number Portability which was commenced on 15 April 2011 (ECS 08/2011), and in respect of which URCA expects to publish its Statement of Results in the near future.

URCA notes CBL's opinion that the Draft NNP does not deal with service providers using Next generation Networks (NGN). URCA believes that while the plan is based on E.164<sup>2</sup> resources for central offices, this does not mean that other numbering, naming and addressing protocols could not be introduced into the NNP as developed and as needed in the sector. At present work on these new protocols is still under development and existing NGN networks have generally been deployed using E.164 resources.

CBL did not provide any specific request for additional resources to be added that might assist them in planning or deploying advanced technologies such as NGN or other technologies using different or unique naming, addressing or numbering systems.

URCA emphasizes that the Final NNP is not intended to be a static document. In fact, URCA anticipates that as technologies evolve and as new services are to be introduced to market, URCA will have to entertain input from the industry for modifications to the numbering plan.

---

<sup>1</sup> As part of the reform process this document was replaced by the Electronic Communications Sector Policy

<sup>2</sup> ITU Recommendation E.164 addresses the international use of numbering resources to ensure cross-border compatibility.

URCA recognizes that number portability could play an important role in the promotion of competition in the sector and refers interested parties to the Number Portability consultation.

### 3. Responses to Consultation Questions

In this section URCA responds to specific question posed by the PUC in its consultation document. Readers should note that the questions refer to the PUC as it was the entity which issued the consultation document. URCA has assumed the PUC's responsibilities in this regard.

#### Question #1

Do you support the PUC's position and its role of a neutral Numbering Plan Administrator? If not, what suggestions or recommendations would you make?

BTC was the only respondent offering additional comments.

BTC welcomed URCA's conclusions with respect to its overall responsibilities for the NNP and specifically, that URCA was avoiding any unnecessary changes to end-users' telephone numbers even where the current CO codes have a low utilization rate.

BTC also supported URCA's efforts to ensure that the NNP endures for a significant period and noted URCA's recognition that new National Numbering Plans should last for twenty (20) years. BTC added that it was surprised that URCA was only predicting that the NNP will endure until 2016, some six years from now and opined that if URCA genuinely believed that the capacity would be exhausted in 2016, then work should be started now to redesign the NNP. BTC noted that exhaustion implies a fundamental re-design on the dialing plan and experience elsewhere indicates that such a re-design and implementation can take between 4 and 5 years.

BTC noted that it did not attempt to undertake a detailed demand forecast for this response although their original submission to the PUC included the fact that the UN population forecast for The Bahamas for 2030 was just over 400k people. BTC stated that the current NNP capacity (equivalent to approximately twenty (20) numbers per forecast head of population in 2030) should endure for many years and urged URCA to set a more ambitious target for NPA exhaustion to avoid the fundamental changes that are implied by URCA's comments.

BTC went on to say that it agreed with URCA's conclusion that targets code utilization for service providers must be set and achieved before they are assigned additional CO Codes. BTC however believes that the proposed targets are unachievable in practice and that the calculation of 'fill capacity' needs significant clarification.

BTC undertook a review of 'fill capacity' (or utilization) targets established by other countries and suggested that these targets could provide helpful guidance. BTC noted the target set by other countries in the following table:

| Country      | Target                                  |
|--------------|---|
| Germany      | 75%                                     |
| Jordan       | 65% - 80% depending on the service type |
| Malaysia     | 70%                                     |
| Pakistan     | 50%                                     |
| Singapore    | 50% to 80% depending on service type    |
| South Africa | 60%                                     |

BTC noted that these countries did not provide an expected date when 100% utilization would be achieved.

BTC added that the criterion to be considered in evaluating an application for additional number blocks should be the utilization at the time the application is made. It argued that 100% utilization can never be achieved because URCA required service providers to ‘age’ numbers that have previously been in service. BTC believes that ‘aging’ is the correct approach but that 100% utilization was therefore an impossible target.

BTC stated that it takes weeks for the ordering and delivery of SIM cards. Additionally, SIM cards held by one retail outlet were unavailable to customers at another retail outlet. It noted that this affects the availability of numbers to customers.

BTC added that the provision of a ‘roaming’ service for international visitors required BTC, and all service providers to have numbers assigned on a temporary basis to facilitate call routing. BTC argued that at any point in time, a proportion of these ‘roaming’ numbers would not be in use.

BTC stated that based on international experience and its own judgment that it strongly urged URCA to set the target for utilization at 75% without the requirement that the *“the remaining 25% is forecast to be exhausted within a six month period”*.

BTC stated that it has not identified an explicit means of calculating ‘fill capacity’ within the Draft NNP or its appendices. BTC noted the definitions of Telephone Numbers Available for Assignment and the definition of telephone Numbers Unavailable for Assignment that are included in the Glossary of the Bahamas Central Office Code Assignment Guidelines. BTC argued that URCA would have to take account of these definitions if utilization targets are adopted. BTC also stated that it was critical for URCA to take into account the fact that CO Codes for fixed-lines and mobile services are assigned on an island basis.



## **URCA's Comments and Decisions**

URCA acknowledges that BTC supports the position of URCA in its role as the neutral Numbering Plan Administrator.

URCA had noted in its response to the first round of consultation on the Draft NNP that The Bahamas was assigned its own NPA in 1996 and that with good management, an NPA was expected to satisfy demand for twenty (20) years. Hence when allocated to The Bahamas, the 242 NPA would have been expected, for planning purposes, to be adequate until the year 2016.

URCA notes that full liberalization in the sector did not happen as expected to the extent that BTC remains by far the most significant user of numbering resources, and there remains a significant proportion of the NPA available for assignment.

While URCA notes that the 242 NPA, when allocated in 1996 was expected to last until at the very latest 2016, URCA has and does not extend this position to mean that the 242 NPA is expected to last until only 2016. Currently, assuming prudent management, URCA does not predict exhaustion of the 242 NPA at any time in the near future.

URCA does not agree that the bulk assignment of telephone numbers to SIM cards that are held in inventory by any retail outlet, waiting for sale to a customer, should be considered as a telephone number already committed to a customer. Hence, such pre-programmed telephone numbers must be classified as numbers available for assignment. URCA's position is that a telephone number only becomes "unavailable" after it is assigned to a specific customer.

Providers should manage their inventories of telephone numbers, whether or not they elect to bulk program SIM cards or carry out similar activities, so that customers approaching a retail outlet may have access to the "available telephone numbers".

URCA has considered all of the arguments and has decided that it will not impose a numerical target to make a service provider eligible for additional CO codes. Instead, URCA will require service providers to use the "Month To Exhaust" work sheet (MTE) as the criteria to award additional CO Codes to a service provider. The MTE is included in Appendix B of The Bahamas Central Office Code Assignment Guidelines (Appendix 1 of the Final NNP – ECS 17/2010).

URCA believes that his approach would eliminate any possibilities for mis-understanding and present a more proportionate application of the guidelines in the sector. It would require the service provider to conduct the necessary market analysis to make a forecast of its needs for additional numbering resources.

It is noted for emphasis that the applicant may be required to justify the data submitted and could be subject to an Audit to verify the submissions.

URCA recognizes that CO Codes have been assigned on an island basis for both fixed-line and mobile services and notes further that it would consider the total complement of central office resources assigned to each island when calculations are made to determine the telephone numbers available for assignment. URCA advises that it will be seeking more efficient methods of allocation provided that the technologies in place permit this.

## **Question #2**

Do you agree with the PUC's assessment on the allocation of Central Office Codes? If not why?

BTC was the only respondent offering additional comments.

BTC has reviewed the list of CO codes used within their network and confirmed that the list produced by URCA was correct, with the exception that the CO Code 333 is used for fixed-line services in Harbour Island and Spanish Wells, Eleuthera.

### **URCA's Comments and Decisions**

URCA notes BTC's comments and notes that the CO Code 333 is listed in the CO Code table (Final NNP, Table 7) as assigned to Eleuthera. URCA's position is that Eleuthera is a rate center with multiple switching entities. URCA also recognizes that Eleuthera includes the main land as well as Spanish Wells and Harbour Island.

As such, URCA only identified the services area of Eleuthera and not the switching entities that make up the entire service area or rate center.

URCA therefore will proceed with the proposal made in the Statement of Results on the first consultation.

## **Question #3**

Do you feel that the current allocation is appropriate? If not, how would you propose that the allocation be changed?

BTC was the only respondent offering additional comments.

BTC agreed with URCA that number changes cause difficulties for end-users. They also noted that the NNP was appropriate and provided regularity certainty.

## **URCA's Decisions and Comments**

URCA therefore will proceed as set forth in the Statement of Results on the first consultation.

### **Question #4**

Do you agree with the PUC's assessment on the current allocation of short codes? If not, provide examples of other short codes in use.

As none of the respondents offered further comments to this question URCA will proceed with the original proposal made in the Statement of Results on the first consultation.

### **Question #5**

Do you agree with the PUC's assessment on the current allocation of Vertical Services Codes? If not, provide examples of other codes in use.

No additional responses were received to this Question. URCA therefore will proceed with the original proposal made in the Statement of Results on the first consultation.

### **Question #6**

Do you agree with the PUC's assessment on the current allocation of the other Vertical Services Codes? If not, provide examples of other codes in use.

Responses were received from BTC and CBL related to the current allocation of other Vertical Service Codes.

#### **BTC**

BTC noted URCA's response in the Statement of Results to the first consultation stating that BTC had reviewed their use of the 52# through 57# and 74# VSCs and believe that it is in compliance with NANP guidelines. BTC went on to confirm that \*52 through \*56 were not in use on BTC's network. \*57 was being used for Customer Originated Trace and \*74 was being used for Speed Dialing (8 digits).

#### **CBL**

Cable Bahamas provided a response that addressed the use of Vertical Service Codes (VSC) with reference to section 21.1 of the Draft NNP. CBL stated that service providers in The Bahamas were using VSCs inconsistent with NANP guidelines, and noted discrepancies with the [BTC] telephone directory listing of \*68, \*92 and \*93.

### **URCA's Comments and Decisions**

URCA notes the comment from both BTC and CBL and repeats that all service providers must follow the procedures set out in the Final NNP and the associated guidelines. URCA notes the discrepancies as listed by CBL and will seek to ensure that VSC are used in compliance with the Final NNP.

### **Question #7**

Do you agree with the PUC's assessment on the adequacy of Central Office codes for future growth? If not, why?

BTC was the only respondent with additional comments to this question.

BTC stated that having considered URCA's Statement of Results, it now supported URCA's position to allocate the remaining 3XX CO codes to fixed line services.

BTC also agreed that all Network Operators had a responsibility *"to find solutions for a more efficient use of all numbering resources."* BTC continued that all Network Operators will have to implement the identified solutions if the required efficiency was to be achieved. BTC noted that it was imperative that all participate in the process of identifying the solutions and that URCA would have an important role in facilitating discussions between competitors.

BTC repeated its opinion that URCA should utilize the experience from other countries in setting practical targets for code utilization.

### **URCA's Comments and Decisions**

URCA has determined that there are sufficient NXX ranges available for growth and to allow for new entrants into both the wire-line and wireless markets for the foreseeable future.

URCA notes that it has a duty to manage all numbering resources to achieve maximum efficiency. The 242 NPA has a large quantity of spare CO Codes, but URCA is concerned that the number of TN's allocated appears disproportionately high for The Bahamas, particularly when it is noted that fixed and mobile services are still predominantly provided by a single operator. As

additional service providers come to market, URCA expects to see an increased demand for CO Codes to permit new entrants to adequately compete.

URCA recognizes that previously CO Codes had to be assigned to standalone switches in each island even though it was accepted that the assignment would be an inefficient use of the resource. Technology presented challenges that imposed inefficiencies by causing blocks of 10,000 telephone numbers to be assigned to a service area with relatively small populations; also multiple codes were assigned to service areas solely to differentiate services in a billing system. As new technologies are introduced, URCA expects service providers to use all opportunities to utilize spare capacities in each island and across the networks to improve the efficiency of use of numbering resources.

As noted previously, URCA will use the Month To Exhaust calculations in its consideration when evaluating requests for additional CO Codes.

## Question #8

Do you agree with the PUC's assessment on the adequacy of codes for future cellular mobile growth? If not, why?

BTC was the only respondent with additional comments to this Question.

BTC believed that URCA was correct to focus on efficient use of the available numbering resources and referred to responses to other Questions

BTC stated that it would be fundamentally wrong for any one operator to design solutions to improve the efficient use of numbering resources as those solutions must be practical for all operators to implement. BTC further stated that other operators could argue that the one operator would have a significant competitive advantage if they are permitted to design the solution(s). BTC therefore emphasized that it could not accept URCA's position that it *"expects BTC to offer solutions to improve the efficiency of utilization of CO Code resources"*. BTC however stated that it recognized its responsibilities and offered to work with URCA and other network operators to identify and implement solutions to achieve a high utilization of the available capacity.

BTC also stated that it were extremely concerned by URCA's statement that URCA intends to *"... forcing operators to use their spare capacity for new services that are introduced."* BTC noted that depending on the services concerned and the call tariffs this may be appropriate. BTC stated that different services are dependent on different technologies and therefore there are significant practical issues to be considered as these future services are introduced. Equally, tariff transparency cannot be ignored by URCA and, should two services with very different call

tariff structures share the same CO Codes, end users will have legitimate reasons for complaining about unexpected call charges. BTC stated that URCA should carefully reconsider the consequences of their statement and adopt a more appropriate approach that balances the practical, the end-users and utilization efficiency. BTC felt that similar services and call tariff arrangements can share CO Codes in the interests of efficient use of numbering resources, but that dissimilar ones should not for the reasons discussed above.

### **URCA's Comments and Decisions**

URCA acknowledges BTC's position but URCA was not suggesting that any one network operator should design solutions to be used throughout the sector. URCA does expect BTC and other service providers to implement procedures within their own networks to achieve maximum utilization efficiencies in the use of all numbering resources.

URCA cannot permit the continued practice of arbitrarily using CO Codes for product identification and as billing solutions when to do so would result in inefficient use of resources. Future applications for additional codes for new services would only be considered in light of the absence of other solutions.

URCA believes it has a duty to seek to achieve maximum numbering resource utilization and that all service providers should expect the same opportunities to be assigned numbering resources.

URCA will always seek to balance practical application, expectation of the end-users and the efficient use of the resources. However, URCA will also be vigilant to have network and service providers use the spare capacities in their assignments, whenever possible, for similar services. Network operators should not expect to be assigned an additional CO Code to introduce a new service when that new service could be accommodated within the scope of existing assignments.

URCA notes that none of the respondents provided any specific comments with respect to the adequacy of codes for future cellular mobile growth. The PUC's assessment of the adequacy of codes for future cellular mobile growth is therefore accepted in the absence of any major objection.

### **Question #9**

Do you agree with the PUC's allocation of the Easily Recognizable Codes (ERCs) ending in "00" within the 242 NPA for service identification? If not, why?

There were no further responses to this Question. URCA therefore will proceed with the proposal made in the Statement of Results on the first consultation.

## Question #10

Do you agree with the PUC's allocation of the Easily Recognizable Codes (ERCs) codes in triplicate, e.g., 222, 333, 444, etc., within the 242 NPA for service identification? If not, why?

BTC was the only respondent to offer further comments to this Question.

BTC noted that in its original response it questioned whether there was any current demand for Easily Recognizable Codes (ERC) and that it did not believe there would be a future demand for them. BTC expressed surprise that notwithstanding the arguments, URCA would still reserve triplicate codes as ERC's. BTC believed that these codes should instead be reserved for future services until demand is identified.

BTC also repeated its opinion that the CO Code 333 should remain assigned to fixed services in Harbour Island and Spanish Wells, Eleuthera. BTC believed that it was not necessary to implement a number change for these areas.

### URCA's Comments and Decisions

URCA notes BTC's opinion. URCA recognizes and accepts BTC's opinion that there is no present demand for ERC's in the sector. As the sector is still in the early stages of liberalization, it is difficult to predict demand for services. URCA notes that every country has a unique market and The Bahamas has its own peculiarities.

URCA has therefore decided to leave triplicate numbers allocated to ERC's as shown in the Final NNP (Table 4). Further as stated in the First Statement of Results and the Draft NNP, URCA is not advocating a number change for Harbour Island and Spanish Wells. These service areas are currently using the triplicate code CO Code 333. Table 4 shows that this code remains assigned to Geographic Fixed Line Services.

Table 4 also showed URCA's assignment of ERCs. The Draft NNP also states that URCA intended that *"All other ERC's in the N00, N11 and NYY formats are reserved for future assignments."*

## Question #11

Do you agree with the PUC's recommendation to revoke the 333 and 999 codes and reassign those services? If not, why?

BTC was the only respondent with additional comments to this question.

BTC welcomed the weight that URCA gave to the interests of end-users in reaching their decision. BTC also believed that it was correct that all licensed operators should adopt 999 as an 'on-net code' and asked URCA to note that it is used within the sector for Station Identification/Telephone Number Identification to facilitate maintenance.

BTC stated that other countries gave a minimum of two(2) years notice for number changes and that, until recently the ITU requested 'at least' two (2) years notice to be given to other countries that may have subscribers that call the numbers that are changing.

BTC requested URCA to consider these conventions if it decides to implement number changes in Eleuthera for the CO Code 333.

### **URCA's Comments and Decisions**

URCA acknowledges BTC's comments.

URCA maintains its proposal to allocate 999 as an on-net code for Station Telephone Number Identification to facilitate maintenance.

URCA's response in the Statement of Results and the Draft NNP was that a number change would not be imposed on Harbour Island and Spanish wells, Eleuthera. URCA has not changed its position and has made the exception to the benefit of the end-users in the service areas even though this assignment was made prior to the PUC being established.

URCA is not at this time contemplating any number changes, however if a number change becomes necessary, URCA will comply with appropriate regulatory best practices to guide its decisions and to plan for any such number changes.

### **Question #12**

In the future, what types of new services or applications would impact the assignment of numbering resources and potentially cause the exhaustion of the 242 NPA?

URCA received no further comments in response to this Question. URCA therefore will proceed with the original proposal made in the Statement of Results on the first consultation.

### **Question #13**

Do you agree with the PUC's recommendation of the evolution of short codes from the 9XX series to the 1XX series?



BTC was the only respondent with additional comments to this Question.

BTC accepted URCA's current proposal for the evolution of short codes and stated that the proposal seemed to be aligned with the interests of end-users.

BTC noted however that it could not find the proposed use of the codes 121 and 131 in the Draft NNP. BTC requested URCA to verify that the intended use of these codes were adequately described in the Draft NNP.

#### **URCA's Comments and Decisions**

URCA acknowledges BTC's acceptance of URCA's proposal for the evolution of short codes.

URCA notes BTC's request for a verification and description in the Draft NNP of the use of the 121 and 131 short codes.

URCA expects that the 121 short code would provide a service especially for interface with international carriers. The 131 short code will be used to facilitate Directory Assistance services to the sector for both domestic and international carriers.

#### **Question #14**

The PUC invites comments on the appropriateness/technical implications of the proposed 1XX dialing arrangement for the use of these codes in the fixed and mobile network?

Responses to this question have been combined with responses to Questions 33 and 34 and addressed below under Question 34.

#### **Question #15**

Do you support the PUC's proposal that it should be responsible for overseeing the inputting of all the rating and routing information for The Bahamas, into the TRA databases? If not, why?

SRG provided the only response to this Question.

SRG agreed with URCA's proposal to be responsible for overseeing the process for inputting rating and routing information into the TRA database for The Bahamas.

### **URCA's Comments and Decisions**

URCA acknowledges SRG's support of the proposal for URCA to advise Telcordia of CO Code assignments for subsequent acceptance of appropriate details from each operator for input to the relevant databases.

URCA therefore proposes no changes to the Draft NNP related to the regulation and management of the process to enter data into the TRA.

### **Question #16**

Do you agree with the PUC's proposal that the numbering resources within the 242-300 code be made available to all service providers? If not, why?

The responses to this Question have been combined with responses to Questions 17, 18 and 19, and dealt with below under Question 19.

### **Question #17**

Do you agree with the PUC's proposal that each service provider be identified according to the NXX thousand block line numbers and that the host central office route the call to the desired service provider? If not, why?

The responses to this question have been combined with responses to Questions 16, 18 and 19, and dealt with below under Question 19.

### **Question #18**

Do you agree with the PUC's proposal to perform an audit of the existing 242 300 resource to determine assigned and spare line numbers in the NXX? If not, why?

The responses to this question have been combined with responses to Questions 16, 17 and 19, and dealt with below under Question 19.

## Question #19

The PUC proposal does not support the assignment of a second toll free code, but the PUC invites comments on the assignment of a second CO code for domestic toll free purposes. For example, BTC would assign codes from the 242 300 range and competing service providers would assign codes from another CO code?

BTC, SRG and CBL provided additional responses to Questions 16, 17, 18 and 19, all of which are dealt with below.

### **BTC**

BTC agreed that it was important that end-users understand the significance of 242-300 as a toll free code and therefore accepted that all service providers should have access to these numbers.

BTC noted that URCA accepted BTC's concerns in dividing the code block into thousand blocks to accommodate only ten (10) service providers. BTC was, however, surprised that URCA was now proposing to further divide the blocks so that twenty (20) service providers may now be accommodated in groups of 500.

BTC urged URCA to reconsider since it believed that URCA's proposal would:

- artificially constrain the market if a significant number of service providers sought to start business;
- introduce inefficiencies in the use of the available capacity if individual service providers required a limited quantity of numbers or required just more than 500 numbers; and
- create the potential that existing service providers, who would have invested in customer loyalty through their use of the individual numbers, to be forced to change their numbers to achieve free blocks of 500 numbers.

BTC welcomed the audit to verify the disadvantages indicated in the last bullet point regarding the use of the (242) 300 numbers.

BTC noted URCA's comments that BTC would be required to route Freephone traffic to each operator in accordance with the assignments that will be published by URCA. BTC stated that it had already made provisions for this traffic in its proposed Reference Access and Interconnection Offer (RAIO).

### **SRG**

SRG supported URCA's proposal to conduct an audit of BTC's use of the 1 (300) NXX and to split the CO Code into 20 blocks of 500 numbers.

SRG noted, however, that URCA stated that *"BTC would be required to route traffic to each operator"*. SRG expressed concerns that routing the service was important but was *"less than the whole picture"*. SRG believed that URCA should take into account that not all 1 (242) 300 services would originate on BTC's network even while BTC retains mobile monopoly. SRG believed that in practice, BTC as the dominant provider would have to be designated as the central routing party for 1 (242) 300 calls, but also that each operator must also be instructed to send all originated 1 (242) 300 calls that are not to terminate on its own network to BTC for onward routing.

SRG also noted URCA's comment that the Draft NNP was not the appropriate forum to discuss billing for the routing of calls. SRG, however, stated that without such a discussion, URCA's 1 (242) 300 proposal became *"unworkable"*. SRG further argued that if BTC were allowed to charge other operators to route 1 (242) 300 calls for other service providers *"then there will be a cost burden on those other operators that BTC does not have in offering the same service to its own customers"*. Given BTC's *"ownership"* of 1 (242) 300 for the purposes of routing, then SRG considered *"that URCA must enforce no-charge routing of 1-300 toll free calls by all operators, not solely BTC, and at the current time SRG knows of no other forum that would be more appropriate than the NNP in which the matter might be aired"*.

#### **CBL**

CBL stated that since the 1 (242) 300 CO Codes has been allocated for all service providers to use for domestic toll free services the assignment of blocks of 500 telephone numbers was *"an overkill and poor administration of numbering given the concern of exhausting the 242 NPA code by 2016"*. CBL recommended the allocation of blocks of 100 telephone numbers instead of blocks of 500 for the service.

#### **URCA's Comments and Decisions**

URCA acknowledges the comments from BTC, SRG and CBL regarding the questions.

URCA notes that all of the respondents accepted URCA's proposal that the 1 (242) 300 domestic toll free service should be made available for all service providers to offer the service to their customers. There seems to be a general consensus that the 10,000 telephone number capacity was more than sufficient for a single service provider. BTC felt that blocks of 1,000 were adequate; SRG believed blocks of 500; and CBL believed that the CO Code should be divided into blocks of 100 telephone numbers.

BTC presented arguments that voiced their concerns about the demand in the sector for the service; also about the effect on the market if a “*significant number of service providers seek to start businesses*”; also that blocks of 500 would introduce “*inefficiencies in the use of the available capacity*” if service providers required more or less than 500 numbers; and most importantly that existing service providers would have to change customers numbers after having branded the telephone numbers for their products and built up customer loyalty.

SRG’s concerns seemed to be centered around charges to other service providers if BTC had to route the traffic.

CBL’s main concern seemed to be that the code should be divided into smaller blocks of 100 instead of blocks of 1,000.

URCA considered the responses and has come to the following decisions.

URCA has considered the arguments about demand in the sector for the service and the size of the block of telephones numbers that should be allocated to each service provider and has decided the following:

- (a) URCA will conduct an audit of the 1 (242) 300 Domestic toll Free Services currently being offered by BTC.
- (b) URCA will seek to gauge the demand in the sector based on the quantity of Domestic Toll Free customers BTC was able to attract and retain.

The 1 (242) 300 Domestic Toll Free Services would be made accessible to all authorized service providers in the sector. BTC will be required to route the service for other service providers in accordance with its RAIO. The assignment of the line numbers will be administered by URCA to ensure a proportionate distribution of the resource.

The following is provided as guidance for the administration of the service:

1. Telephone numbers in the 1 (242) 300 CO range will be assigned to service providers on a line number basis, upon request.
2. URCA will maintain a master list of assigned numbers which will be updated on URCA’s website.
3. The applying service provider may request specific telephone numbers for assignment (though grant is subject to availability).
4. Upon approval from URCA, the service provider will negotiate with BTC for the service to be provisioned. URCA recognizes that the service would have to be routed through the BTC network and possibly interconnected with the applicant’s network.

5. URCA requires that all end-users should have originating access to the service without regard to their service provider.

### **Question #20**

If a second toll free code is assigned to a competitive service provider, what NXX code should be assigned and what method of service provider identification should be used?

URCA notes that no new responses were received to this Question.

URCA will therefore decide what NXX codes should be assigned to competitive service providers and how the service providers would be identified, if the need arises, based on the Final NNP and associated guidelines.

### **Question #21**

Do you agree with the PUC's proposal that the numbering resources within the 800 - 389 code be made available to all service providers? If not, why?

The responses to this Question have been combined with responses to Question 22, and dealt with below.

### **Question #22**

The PUC's requests comments regarding the provision of 800 toll free service throughout The Bahamas.

BTC and SRG provided responses related to these Questions.

### **BTC**

BTC noted URCA's confirmation that the current limited use of these numbers is legitimate. BTC concurred with URCA's conclusions and in particular that call routing and interconnection arrangements needed to be formalized before the proposal can be successfully implemented. BTC offered to assist URCA in the audit of the current use of these numbers.

## **SRG**

SRG supported URCA's proposal to audit BTC's use of the 1-800-389 numbering resource and also supported the use of the resource by other operators.

SRG also noted that provisions were made [in BTC's network] to route a few 800 toll free numbers internationally without the use of substitute codes 880, 881 or 882. SRG stated that these same options should be made available so that calls from other service providers could similarly be routed and that the appropriate inter-carrier billing can be applied as applicable.

SRG suggested that URCA "missed the point" when it responded to SRG's original response. SRG noted that an entity with a 1-800 number that terminates in the United States for toll free international calling from another country should be able to accept originating traffic from all service providers in The Bahamas, not just from BTC. The current set-up only permits originating traffic from the BTC network. SRG stated that the same arrangements as in the BTC network should be extended to all service providers with appropriate arrangements for billing.

## **URCA's Comments and Decisions**

URCA clarifies that it did not intend to confirm *"that the current limited use of these numbers [1-800-389] is legitimate."*

Both BTC and SRG agreed with URCA that competing service providers should have equal access to comparable numbering resources to enable them to compete fairly for customers.

The 1-800-389 resource has been assigned to The Bahamas as one of the eleven 800 NXX codes not included in the portability database. URCA therefore believes that this resource should be made equally accessible to all service providers.

BTC will be required to route traffic for all authorized service providers in The Bahamas.

URCA has reviewed SRG's comments with regard to the provision of other 800 toll free services throughout The Bahamas. URCA notes that BTC does offer a few toll free 800 services on its network for originating traffic to terminate in North America. URCA agrees that since BTC has included in its RAIO provisions that cover transit to international voice services, this transit service can be used by other service providers to access these 1-800 originating services.

Resources within 1-800-380 will be approved by URCA to be assigned to service providers by line numbers.

### **Question #23**

Do you agree with the PUC's proposal regarding allocating the 555 XXXX resources for information services throughout The Bahamas? If not, why?

BTC was the only respondent who offered comments on the use of the CO Code 555.

BTC agreed with the proposal to use the CO Code 555 for Information Services. BTC noted that the INC Guidelines for the code includes provision for Revenue Sharing services that are referred to as "Premium Services" in some countries.

#### **URCA's Comments and Decisions**

URCA notes that BTC agrees with the proposal for the use of the CO Code 555 for Information Services.

URCA also notes BTC's other comments that the INC Guidelines provides for the code to be used for Revenue Sharing Services that are referred to as Premium Services in some other countries.

URCA at this time, however, is considering the CO Code 555 for Information Services in accordance with the Allocation Table in the Final NNP.

### **Question #24**

Do you agree with the PUC's recommendation that CO Codes or line number should not be assigned to international resellers? If not, why?

No further comments were received regarding this Question. URCA therefore will proceed with the proposal made in the 2010 (May) Statement of Results on the first consultation.

### **Question #25**

Do you agree with the PUC's proposal that the assignment of CICs to international service resellers should be allowed? If not, why not?

The responses to this question have been combined with responses to Questions 26 and 29 and dealt with below under Question 29.



### **Question #26**

The PUC invites comments on whether there is the need for such assignments in The Bahamas and if their use is technically feasible? If not, why?

The responses to this question have been combined with responses to Questions 25 and 29 and dealt with below under Question 29.

### **Question #27**

Do you agree with the PUC's proposal that IMSIs are not required for international service resellers? If not, why?

No responses were received to this Question. URCA therefore will proceed with the proposal made in the May 2010 Statement of Results on the first consultation.

### **Question #28**

Do you agree with the PUC's proposal that domestic service resellers should be assigned blocks of numbers from the CO code(s) assigned to their facility-based provider? If not, why?

No responses were received to this Question. URCA therefore will proceed as set out in the Statement of Results on the first consultation.

### **Question #29**

Do you agree with the PUC's recommendation that wire line domestic service resellers should be assigned CICs? If not, why?

The responses to Questions 25, 26 and 29 have been grouped and are addressed here. BTC was the only respondent to these Questions. These are grouped in the response since they all refer to various aspects of the use of CICs.

BTC agreed with the proposal that the telecommunications market in The Bahamas was different from other members of the NANP, but it believed that the relatively small population

and comparatively low level of migrant labour implied that there would be limited attraction to resellers.

BTC noted that a critical issue with CICs was that they were digits that had to be dialed in addition to the required telephone number. BTC therefore felt that the quantity of digits that had to be dialed would influence market development and may inhibit customer acceptance of the service.

BTC also claimed that the Draft NNP did not clearly state URCA's intention to use the 10X code set and that it was not clear whether URCA would limit the codes to just three digits. BTC stated that the 3 digit format would provide for 9 unique codes, while a 4 digit format would provide capacity for 99 resellers which would be more than sufficient for The Bahamas.

BTC repeated its opinion that URCA should consider a 4 digit CAC/CIC to be included in the NNP. BTC stated that it was BTC's preference for URCA to consider utilizing a code set out of the 9 series, but that it accepted URCA's decision to use the 10 code set.

#### **URCA's Comments and Decisions**

URCA acknowledges BTC's response.

URCA however offers the following to clarify the use of Carrier Access Codes (CAC) and Carrier Identification Codes (CIC) and how URCA proposed that these codes should be assigned and used.

The 10X format mentioned in the Draft NNP is to be the first 3 digits of the CAC. The last 4 digits of the CAC are actually the CIC.

In accordance with the Carrier Identification Assignment Guidelines, the CAC is structured based on Feature Group B (FG B) and Feature Group D (FG D) formats where:

- FG B is in the format: 950-XXXX;
- FG D is dialed using a 7-digit format (The accepted format in North America is 101-XXXX); and

XXXX is associated CIC for the Feature Group and X is any digit between 0 and 9.

Each of these feature groups have a theoretical capacity of 10,000, however in accordance with the guidelines some CIC codes are assignable by the CIC administrator and others are set aside for carriers to use for intra-network assignments.

Primary Interexchange Carrier (PIC) is the default carrier selected by a subscriber to route his long distance services. The subscriber only need dial the 10 digit number to reach the person they wish to speak with (i.e., 1 plus the area code plus the telephone number). When the end-

user wishes to access the services of another carrier, then they must dial that carrier's CAC plus 1 plus the area code plus the telephone number.

URCA has decided that in those instances where a CIC is required in The Bahamas, for routing and billing of calls from end-users via trunk-side connections, to interexchange carriers and other entities, then the associated NANP Guidelines would be used for those CIC assignments.

Network operators in The Bahamas would be required to apply through URCA for such CIC assignments.

When a CAC code is required for the end-user to access long distance carrier from entities other than the default carrier, then URCA would follow the NANP Assignment Guidelines for those resources.

URCA therefore does not accept that using the 10X format would create a limited capacity for resellers.

Further, for clarification, URCA notes that use of the 10X or 950 format for CAC/CIC codes has no bearing on CO Code capacities.

### **Question #30**

Do you agree with the PUC's proposal that cellular mobile domestic service resellers should not be assigned CICs? If not, provide rationale.

No responses were received to this Question. URCA therefore will proceed with the original proposal made in the Statement of Results on the first consultation.

### **Question #31**

Do you agree with the PUC's recommendation that domestic service resellers, both wire line and cellular mobile, should not be assigned IMSIs? If not, why?

No responses were received to this Question. URCA therefore will proceed with the proposal made in the Statement of Results on the final consultation.

### **Question #32**

The PUC invites comments on any other numbering allocation issues for resellers.

No responses were received to this Question. URCA therefore will proceed with the proposal made in the Statement of Results on the final consultation.

### **Question #33**

Do you agree with the PUC's recommendation that 911 and 919 continue to be used for emergency notification? If not, why?

Responses to this Question have been combined with responses to Questions 14 and 34 and addressed below under Question 34.

### **Question #34**

The PUC invites comments on the use of the remaining N11 codes: 211-811, in The Bahamas.

Responses to Questions 14, 33 and 34 have been combined and are addressed here. URCA has combined these Questions to better respond to the issues raised.

BTC, SRG and CBL provided additional comments to issues raised in these Questions.

#### **BTC**

BTC stated that it had initially disagreed with the proposal for the use of N11 codes in the initial consultation on the Draft NNP, but that it now recognizes the potential end-user benefit and now support the approach. BTC explained that it was their opinion that URCA's intention to make limited use of these codes, whilst reserving the unused codes until demand was proven and justified by the utilization of the allocated N11 codes.

They requested URCA to note that BTC had recently initiated their own review of the N11 codes. The results revealed that CO Code 411 was being considered to facilitate the proposed Directory Assistance Call Completion feature, because of its universal appeal.

#### **SRG**

SRG agreed with URCA's proposal for the implementation of 9XX short codes but they had concerns with the reliability of the BTC network to provide off-net single point of access to emergency services. They explained that the reliability of such services would be affected by interconnection between BTC and other operators; and between BTC and the emergency services system.

SRG acknowledged that independent access to emergency services by multiple operators would require system to the emergency services system.

SRG noted that they had no statistical data to establish reliability figures between BTC's network and the emergency services system. They stated however that it was their experience that interconnection between BTC and SRG did not achieve a 95% reliability. This they argued corresponds to over 18 days of outage in a 12 month period.

SRG stated that this was not adequate for customer access to emergency services.

### **CBL**

CBL noted that it was their opinion that a single number be published as the standard number for Police Emergency. They stated that both 911 and 919 are listed in the Draft NNP and that "911 will be used on net for BTC and 919 will be for their operators."

### **URCA's Comments and Decisions**

URCA acknowledges BTC's support of the original proposal for the use of N11 codes. URCA also notes that BTC initiated a review of N11 codes and was looking into the possible use of the short code 411 for "Directory Assistance Call Completion feature".

URCA refers to the allocation tables in the Final NNP as guidance to network operators for the introduction of new services.

URCA acknowledges SRG's support of the proposal for the implementation of 9XX short codes. URCA also notes SRG's concerns with the reliability of interconnecting circuits between SRG and BTC.

URCA is concerned with network operators maintaining reliable circuits especially for access to emergency services. These are addressed in the service level agreements (SLA) contained in the approved BTC Reference Access and Interconnection Offer available on BTC's website at [www.btcbahamas.bs](http://www.btcbahamas.bs).

URCA acknowledges CBL's response that there should be a standard number for emergency services. It seems that CBL interprets the short code allocations to be that end-users on BTC's network dial 911 while end-users on other networks would have to dial 919. For clarification, URCA notes that 919 is the standard number for access to emergency services in The Bahamas. Over time, due to the fact that the majority of tourists are from the United States of America, it was decided that 911 would be included as an additional access code for emergency services. Additionally, legacy access to the police emergency services is BTC's network. New network operators therefore would have to access this service through interconnection agreements with BTC until such time as the police emergency service has the capability for multi-operator access.

URCA emphasizes that end-users on any network in The Bahamas may dial either 919 or 911 to access emergency services. Each network operator is obliged to establish interconnections with BTC for their customers to have access to emergency services in accordance with their licence conditions and URCA's licensing guidance guidelines or other obligations.

### **Question #35**

Do you agree with the PUC's recommendation to follow the existing VSC assignments? If not, why?

The responses to this Question have been combined with responses to Questions 36 and 37 and dealt with below under Question 37.

### **Question #36**

The VSCs 94 to 99 have been set aside for local use and the PUC invites opinions on the appropriate use of these numbering resources within The Bahamas.

The responses to this Question have been combined with responses to Questions 35 and 37 and dealt with below under Question 37.

### **Question #37**

Do you agree with the PUC's recommendation that all VSC assignments be handled through the PUC? If not, why?

URCA has grouped Questions 35, 36 and 37 and addressed there together below, since all requested additional comments on VSC's.

Additional comments were provided by BTC and CBL.

#### **BTC**

BTC agreed with the proposal that Vertical Service Codes (VCS) 94 through 99 should be set aside for local use. They noted that they already have \*94 in service as a VSC.

#### **CBL**

CBL stated that the VSC allocation table showed that service providers were using different VSCs for services. They noted that \*68 should be used for “*Call Forward Busy line/Don’t Answer Activation*” but was listed in the BTC telephone directory for “*Selective Call Acceptance.*” They also noted that \*92 and \*93 were also not being used in accordance with NANP guidelines.

CBL questioned whether the regulator would require all services providers to comply with the Vertical Services Code table for “consistent numbering” of VSC’s.

### **URCA’s Comments and Decisions**

URCA acknowledges the responses from BTC and CBL.

URCA noted BTC’s support for the proposal and recognizes BTC’s use of \*94.

URCA notes that BTC use of \*94 in the Subscriber Activated Call Blocking (SACB) feature operations is within BTC’s assignable code range and does not violate the Draft NNP.

CBL’s claims that \*68, \*92 and \*93 were not being used in accordance with the guidelines is supported by BTC’s listing in the 2010 Telephone Directory. These listings are:

- |           |  |
|-----------|--|
| *68       | Selective Call Acceptance  |
| *92 & *93 | Call Blocking Operations   |
| *68       | Call Forwarding Busy Line/Don’t Answer Activation  |
| *92 & *93 | Customer Programmable Call Forwarding Don’t Answer Activation/Deactivation, respectively. URCA therefore will issue a regulatory measure for BTC to adjust these assignments to be in compliance with the Final NNP. |

URCA has made appropriate changes to the original proposal outlined in the Draft NNP.

### **Question #38**

Do you agree with the PUC’s recommendation that the digits length for service provider specific services be 3-digits in length? If not, why?

URCA received no further comments to this Question. URCA therefore will proceed with the proposal made in the Statement of Results on the initial consultation on numbering.

### **Question #39**

The PUC invites comments on the appropriate use of the 1XX range in The Bahamas.

BTC was the only respondent to this Question.

BTC agreed that URCA should retain flexibility for future assignments by avoiding decisions about the 1XX range until the telecommunications' market has developed further. BTC continued that it was disappointed that URCA decided to use the code set 10X for CICs, rather than a code set from the '9' series as BTC had suggested in the initial consultation.

#### **URCA's Comments and Decisions**

URCA notes BTC's support for the proposal with respect to the use of the 1XX range.

URCA acknowledges BTC's response regarding the use of 10X and the 9 (series) taking this to mean the 1XX and 9XX central office NXX ranges. This was addressed in detail in URCA's response to question 29 above. In summary however, the 10X and 9 series referred to CAC/CIC resources that are different to the NXX resources used for CO Codes.

### **Question #40**

The PUC invites comments on the identification of any other number range for the use of service identification or access.

URCA received no further comments to this Question. URCA therefore will proceed with the proposal made in the Statement of Results on the initial consultation on numbering.

### **Question #41**

Do you agree with the PUC's proposal that the allocation of short codes be made into three categories: Public Interest, Common, and Service Provider specific? If so, by what ratio? If not, why?

BTC was the only respondent to provide further comments on the Question.

BTC stated that having considered URCA's rationale, it was still of the opinion that two (2) categories were sufficient, but BTC accepted URCA's conclusion.

#### **URCA's Comments and Decisions**



URCA acknowledges BTC's acceptance of URCA's conclusions that the allocation of short codes be made into three (3) categories (i.e., Public Interest, Common, and Service Provider specific).

### **Question #42**

Do you agree with the PUC's proposal that the Guidelines be accepted and used by the PUC, as The Bahamas National Numbering Plan Administrator? If not, why?

BTC was the only respondent to provide further comments to this Question.

BTC endorsed URCA's intention to ensure that the Guidelines reflect the Final NNP and suggested that an editorial review should be conducted in the document to remove all remaining references to the PUC, and other minor inconsistencies.

### **URCA's Comments and Decisions**

URCA acknowledges BTC's comments and will make appropriate corrections.

#### **4. Next Steps and Way Forward**

URCA has today published this Final Statement of Results together with the final version of The Bahamas National Numbering Plan, which will be implemented with immediate effect.

Interested parties should note the provisions for review of the NNP on a going forward basis, which are contained in section 1.3 of the Final NNP.