The Bahamas National Numbering Plan

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UTILITIES REGULATION & COMPETITION AUTHORITY
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1 Introduction

1.1 Legal Framework

The Utilities Regulations and Competition Authority (URCA) was established in 2009 with the coming into force of the URCA Act, 2009. URCA regulates the electronic communications sector through the Communications Act 2009 (Comms Act), to including the administration of numbering resources in accordance with Section 79 of the Comms Act.

Section 79(1) of the Comms Act requires URCA to publish a numbering plan for The Bahamas, and make rules for the allocation and assignment of numbers to licensees.

79(2)(a) further requires URCA to comply with applicable international numbering standards, including the North American Numbering Plan Administration (NANPA) practices, since The Bahamas is a member of the North American Numbering Plan (NANP), sharing country code 1 with North America, Bermuda and other countries in the Caribbean.

The Bahamas National Numbering Plan (the NNP) therefore sets out the policy and general guidelines that are to be used in the administration of all numbering resources in the electronic communications sector for The Bahamas.

1.2 Consultation Process

In May 2008, URCA's predecessor (the Public Utilities Commission (PUC)) initiated a Public Consultation process on a National Numbering Plan for The Bahamas. The completion of the work in that consultation process was delayed with the introduction of new electronic communications sector legislation in 2009 and the subsequent transition of the PUC to URCA, as the new regulator.

The consultation commenced by the PUC is now being concluded by URCA. On 25 May 2010 URCA published the Statement of Results for the PUC's initial round of consultation, along with a draft Bahamas National Numbering Plan.

URCA has now reviewed the responses to the Statement of Results, and the draft Bahamas National Numbering Plan (NNP), and now publishes the Final Bahamas National Numbering Plan. URCA has separately published the Statement of Results on the second round public consultation process (ECS 16/2011]). URCA apologises for the delay in finalizing this consultation and publishing these documents, and thanks stakeholders for their support in this process.

1.3 Maintenance and Review

URCA proposes to conduct scheduled reviews of the NNP on a three yearly basis to ensure that it remains appropriate and fit for purpose. URCA will also make changes as required to react to any international developments which may impact on the matters addressed in the NNP.

Finally, interested stakeholders are welcome to make recommendations for reviews or amendment at any time. URCA will consider such recommendations when received and will take such action as URCA deems appropriate having regard to the relevant circumstances.

2 Background

The Bahamas Telecommunications Corporation (BaTelCo), now The Bahamas Telecommunication Company Limited (BTC) was historically both the monopoly incumbent provider of voice telecommunications services, as well as the numbering administrator for The Bahamas. BaTelCo at that time had responsibility to assign itself numbering resources for its own operation and under its administration. In October 1996, The Bahamas was assigned its own exclusive Numbering Plan Area Code, "242", which was introduced with permissive dialing (permitting calls to be processed with both the old and the new codes) which ended on Monday March 31, 1997.

Concurrent with the assignment of an exclusive Numbering Plan Area Code for The Bahamas, and the liberalization of domestic voice telecommunications in The Bahamas the PUC, as the then sector regulator, took over as the numbering administrator for The Bahamas. This responsibility was formally established in URCA through the provisions of the Comms Act set out above.

Although URCA has already assumed the responsibility for the administration of numbers in The Bahamas, the preparation and issuance of this Numbering Plan is intended to formalize and codify URCA's responsibilities and policies in relation to its role as the numbering administrator in The Bahamas.

3 Overview

3.1 Objectives of the National Numbering Plan

The objective of NNP is the management of all numbering resources in The Bahamas that are used by relevant licensees to deliver electronic communications services to end users throughout the country.

In accordance with section 4 of the Comms Act and the Electronic Communications Sector Policy (ECS Policy) the NNP is designed to ensure that URCA manages numbering resources in a manner which enhances the efficiency of the Bahamian electronic communications sector, promotes investment and innovation in electronic communications networks and services, encourages, promotes and enforces sustainable competition, and ensures optimal use of those numbering resources.

In the wider context, URCA seeks to comply with international obligations (set out in 3.2 below) relating to the administration of numbers within the North American Numbering Plan.

3.2 North American Numbering Plan Administration Guidelines

As stated earlier, The Bahamas is a member of the NANP which is the numbering scheme for the public telephone networks in countries under country code 1. These countries are: The Bahamas, the United States of America, Canada, Bermuda, and sixteen (16) Caribbean nations[1].

URCA has prepared the NNP in conformance with the NANP guidelines, and to reflect the relevant recommendation of the International Telecommunications Union (ITU) related to numbering resources. Perhaps the most relevant is ITU Recommendation E.164 which defines the structure and format for the international public telecommunication numbering plan.

3.3 Scope of the National Numbering Plan

The NNP governs the administration of all numbering resources for telephone services in the electronic communication sector in The Bahamas.

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[1]The NANP Caribbean countries and their NPAs are: Anguilla: 264; Antigua & Barbuda: 268; Barbados: 246; Bermuda: 441; British Virgin Islands (the): 284; Cayman Islands (the): 345; Dominica: 767; Dominican Republic (the): 809/829/849; Grenada: 473; Jamaica: 876; Montserrat: 664; St. Kitts and Nevis: 869; St. Lucia: 758; St. Vincent and the Grenadines: 784; Trinidad and Tobago: 868; and Turks & Caicos: 649 and Saint Maarten 721 (pending implementation). Canada and the United States each have multiple NPA codes.

The NNP defines the roles and responsibilities of URCA as the numbering administrator, as well as code applicants and code holders. It sets the rules and guidelines for the use of numbering resources in compliance with ITU recommendations, NANP guidelines, and applicable laws of the Commonwealth of The Bahamas, including the regulatory framework for the Electronic Communications Sector[2].

It is worth noting however that while consistency with the NANP guidelines is necessary for The Bahamas to operate within country code 1, URCA reserves the right to modify and make modifications to the NNP in order to ensure that they continue to be appropriate for The Bahamas.

3.4 Numbering Resource Guidelines

URCA includes the following three guidelines for The Bahamas:

- The Central Office Code Assignment Guidelines (COCAG);
- The International Mobile Station Identifier Assignment Guidelines; and
- The Bahamas Service Area/Network Code-International Signaling Point Code Assignment Guidelines.

Other relevant NANP guidelines and ITU-T Recommendations may also provide guidance to URCA on use and administration of numbering resources in The Bahamas.

[2]The URCA Act, 2009; The Communications Act, 2009; The UAT Act, 2009; The Electronic Communications Sector policy

4 Dialing

4.1 Number Format

All calls throughout the world are made using standardized formats which ensure interoperability between networks both within and across borders. The format and structure for numbers issued for public telephone services in The Bahamas conforms to NANP guidelines, and is as follows:

NXX- NXX-XXXX (N may be between 2 and 9, and X may be between 0 and 9)
(ABC-DEF- GHIJ)

This 10-digit telephone number contains the following components:

i. the first group of three characters, the ABC digits (NXX format), is the Numbering Plan Area Code (NPA);

ii. the second group of three characters, the DEF digits (NXX format), is the Central Office Code (CO Code); and

iii. the third group of characters, the GHIJ digits (XXXX format), is the Subscriber's Line Number.

4.2 Dialing Plan

The Dialing Plan detailed in this section of the NNP sets out the requirements for making calls originating from locations on networks situated in The Bahamas. The system employed in The Bahamas and set out in the NNP, conforms to NANP administration practices and the relevant International Telecommunication Union (ITU) Recommendations.

The country code for The Bahamas is: "1". The country code is an identifier which enables the routing of calls from international locations to The Bahamas. The country code "1" is shared amongst all countries in the NANP.

There is a single Numbering Plan Area (NPA) Code assigned to the entire of The Bahamas, "242", which is commonly referred to as the area code.

Local dialing (intra-island) within The Bahamas is standardized in the seven digit format as follows[3]:

NXX- XXXX

Domestic Long Distance calls (calls between different islands in The Bahamas) are processed with 11 digits:

1+242 + NXX- XXXX
(Access prefix + NPA + NXX-XXXX)[4]

Stakeholders would note that the "Access Prefix" is, in this instance, the same as the Country Code. It should also be noted that while the foregoing rules apply to fixed dialing, for calls originating on mobile networks, Local (intra-island) and Domestic Long Distance dialing is possible using any of the 7 digit (NXX – XXXX), 10 digit (NXX - NXX – XXXX) or 11 digit (1 + 242 + NXX – XXXX) formats. The limitation on fixed dialing will remain in place as a result of the toll surcharge payable for calls between islands in The Bahamas, and will be reviewed by URCA if the circumstances change.

International Long Distance calls to other countries within the NANP are dialed using 11 digits:

1 +NPA + NXX-XXXX
(Access prefix + NPA + NXX-XXXX)

International long distance calls to countries outside the NANP are dialed using the format required by the terminating country. Callers may use either the prefix 01 or 011 depending on the level of assistance required to complete the call, as follows.

The prefix "01" is used for International Operator assisted calls. These would be in the format:

01 + Country Code + Area Code + Telephone Number

The prefix "011" is used for direct dial International calls. The call format is:

011 + Country code + Area Code + Telephone Number

Directory assistance for international calls (within and outside the NANP) may be obtained by dialing "0".

[3]It is to be noted that the Industry Numbering Committee (INC) Recommended Plan for Expanding the Capacity of the North American Numbering Plan calls for implementation of the INC Uniform Dialing Plan (UDP) prior to transition of an expanded NANP, and the UDP calls for 10-digit NANP wide dialing including for local calling prior to transition.

[4]In the NANP, the digit "1" is used interchangeably as the country code as well as an access digit.

5. Central Office Codes

5.1 CO Code Overview

Central Office Codes (CO Codes) have traditionally been the part of the telephone number format used to identify initial destination addresses in public networks. As noted in section 4.1, the term CO Code refers to digits "D-E-F" of the 10-digit North American Numbering Plan (NANP) telephone number. The management of CO Codes represents the most significant portion of the work of the numbering administrator.

The term central office is derived from traditional fixed public switched networks and refers to a network element where a subscriber's line is connected to switching equipment for connecting other subscribers to each other either within a local environment, or internationally. In the modern network environment, CO Codes are used on switched networks (fixed and mobile) to identify subscribers on the originating network and to route calls to subscribers on the terminating network. URCA will only assign CO Codes to Service Providers holding Individual Operating Licences who intend to operate electronic communications networks in The Bahamas providing services for which numbers are required (generally telephony and other "switched" services).

Each CO Code resource provides a capacity of 10,000 telephone numbers (TN) to network operators, in the range of 0000 through 9999 of the "GHIJ" digits. Currently, a CO Code represents the smallest block of numbers that can be assigned by URCA to a Code Applicant.

URCA *may* consider establishing procedures to permit the allocation and assignment of TNs to service providers in smaller blocks (for example: blocks of 1,000) out of the traditional CO Code NXX range. Due to the limitations in switching and addressing capabilities, URCA expects that calls would continue to be routed based on an NXX basis between service providers (so that all blocks within a CO Code would need to be assigned to a single provider) but the terminating carrier would be required to route the call to a destination within its network based on the NXX-X, the seventh digit (the "G" digit). This may be considered to enable service providers to be assigned smaller numbers of TN resources in areas where the market and the island population make the assignment of 10,000 TNs an inefficient use of resources. It should be noted that current assignments in some of the less populated islands of The Bahamas exhibit this challenge.

If and when number portability is implemented in The Bahamas, URCA will consider the use of the number portability facilities, if feasible, to facilitate the assignment of blocks of 1,000 numbers within a single CO Code to different service providers, where necessary to ensure efficient assignment of TNs.

In any NPA within the NANP, there is a maximum of 800 possible CO Codes[5]. Additionally, the NNP has reserved the 9XX CO Code so as to avoid confusion with assigned special service allocated short codes, at this time. This effectively reduces the available CO Codes to 700.

The following CO Codes are allocated or reserved for special services:

- Any N11 NXX: Reserved for Service Codes (i.e., 211, 311, 411, 511, 611, 711, 811, 911).
- Any N00 NXX; Reserved as Service Codes (i.e., 200, 300, 400, 500, 600, 700, 800, and 900).
- Any codes allocated or assigned for special purposes e.g., 555 reserved for information services.
- 950 for future services.
- 976 for future services.
- Local Plant Test Codes (e.g., 958 and 959)
- Easily Recognizable Codes (ERCs): Any NYY NXX CO Codes that have the same numerical value in each position; 222, 333, 444, etc.

CO Codes will be assigned to permit the most effective and efficient use of the resource in order to prevent premature exhaustion of the NPA. This should avoid changes to the numbering and dialing plan which may result in the following adverse effects:

a) customer impacts (e.g., dialing, changes to advertising and stationery, etc.);
b) CPE modifications;
c) domestic and international switching and terminal hardware and software modifications;
d) operational support systems modifications; and
e) reprogramming of non-telecommunications data bases that contain telephone numbers.

URCA notes that central office switching technologies have evolved to more intelligent networks which deliver location independent converged services, as demonstrated in mobile networks and packet switched next generation networks. URCA will monitor these developments especially for those requiring resources other than E.164 for naming and addressing services to end users[6] so as to ensure that URCA is in a position to ensure that if necessary the required addressing resources are available to network providers.

[5] 1XX and 0XX are not assigned.
[6] Both the U.S. Federal Communications Commission's North American Numbering Council and the ITU have groups monitoring the "future of numbering" and any developments in naming, numbering and addressing that will impact the NANP and The Bahamas will likely be discussed in those venues and they should be monitored.

5.2 Central Office Code Assignment Guidelines

The assignment and use of CO Codes in The Bahamas are governed by the Central Office Code Assignment Guidelines (COCAG) included in this NNP at Appendix 1. COCAG provides direction to the Administrator, Code Applicants, and Code Holders with respect to the administration, assignment, activation, and use of CO Codes.

COCAG applies throughout The Bahamas, subject to the regulatory and licensing regime established under Comms Act, the Electronic Communications Sector Policy and other regulatory measures.

5.3 Industry Notification of Rating and Routing Data

Industry notification of rating of calls and call routing data is achieved through the traffic routing administration which for the NANP is currently the Telcordia Routing Administration (TRA)[7], operated by Telcordia Technologies, Inc. (Telcordia). The TRA supports the telecommunications industry by providing data services and products for the completion of calls in public networks and the proper routing of these calls. The TRA data is NANP wide in its scope.

Industry notification outputs are generated when the rating and routing data for new central office codes in the NANP are entered in the TRA Business Integrated Routing and Rating Database System (BIRRDS), which is a centralized database upon which the rating (payments) and routing (delivery) of calls within the NANP area between relevant network operators is coordinated.

Service providers in The Bahamas are required to contact TRA to submit information on new CO Codes in accordance with COCAG[8].

URCA will coordinate the entry of CO Code assignment data into the TRA BIRRDS for new CO Codes assigned to networks in The Bahamas. This process will follow the provisions of the NANP.

5.4 CO Code Assignment Principles

The following assignment principles apply to all aspects of CO Code assignment:

- CO Codes are to be assigned only to identify initial destination addresses in public networks, not addresses within private networks;

[7]Traffic routing administration has been provided by Telcordia Technologies, Inc (formerly Bellcore) since the Modification of Final Judgment in the United States which broke up AT&T in 1984. The TRA website is www.trainfo.com

[8]A service provider may take a training course and be authorized to enter its own data into the TRA BIRRDS or it may contract with Telcordia to enter the data on its behalf. In addition some third parties (known as AOCNs) may enter data into BIRRDS on a service provider's behalf, not all AOCNs perform services for Caribbean companies. See trainfo.com.

- CO Codes are a finite resource that should be used in the most effective and efficient manner possible. All Code Applicants are required to demonstrate that these provisions are satisfied;

- Information required from the Code Applicants in support of CO Code assignment shall be: kept to a minimum; uniform for all "Code Applicants"; treated as proprietary and confidential, except for information that is in the public domain. Information required for input into the appropriate telecommunications industry routing and rating database systems will become available to the public upon input into those systems;

- CO Codes will be assigned in a fair and impartial manner to any Code Applicant that meets the criteria for assignment; and,

- Code Applicants must comply with all applicable regulations that apply to the services that they wish to provide.

5.5 Assignment, Reservation and Aging of CO Codes

5.5.1 Assignment

CO Codes will be assigned and reserved, on a first-come, first-served basis, to Service Providers holding Individual Operating Licences in response to applications, having regard to plans and projections submitted by the Service Provider to URCA from time to time.

Assignment of an Initial Code will be to the extent required to terminate traffic as authorized by URCA in accordance with COCAG. An Initial Code assignment will be based on identification of a new switching entity, physical Point of Interconnection (POI), or unique exchange area rate center consistent with regulatory requirements. Utilization criteria or projections may not be a satisfactory basis upon which to justify an Initial Code assignment.

Assignment of Additional Code(s) will be made for an established POI or switching entity by satisfying the criteria in COCAG. For assignment of additional CO Codes for growth purposes, the Code Holder must certify that existing CO Codes for the switching entity are projected to exhaust within 12 months as validated on the "Month to Exhaust" worksheet included in COCAG.

A CO Code will only be assigned to a single Code Holder and shall only be associated with either a single switching entity or POI that is owned or controlled by that Code Holder.

5.5.2 Reservation

CO Code reservation is only permitted if the Code Applicant can demonstrate that the reservation of a CO Code is essential to accommodate technical or planning constraints or

pending regulatory approval of a tariff to provide service. URCA will seek to keep reserved codes to a minimum. Where the NPA is in jeopardy of being exhausted, all CO Code reservations may be released at the sole discretion of the URCA.

Code Applicants and Code Holders must obtain an Operating Company Numbers (OCN), Revenue Accounting Office Codes (RAO) and Common Language Location Identifier (CLLI) Codes, and comply with the requirements for the assignment and use of such codes. These requirements are managed by TRA.

The industry standard Plant Test Codes are 958 and 959, which would generally be applied and used in The Bahamas. URCA may consider assigning additional CO Codes to Code Applicants or Code Holders for testing purposes (i.e., Plant Test Codes) on a temporary basis for a maximum period of six months. These Plant Test Codes are not to be published in the BIRRDS database. URCA may recover the Plant Test Code within 60 calendar days of notification to the Code Holder at any time during the six-month period.

5.5.3 Aging

Aging numbers are telephone numbers that have been disconnected (regardless of reason for disconnection) and are not available to be returned to service by assignment to another end user until a certain period of idle time passes. The following aging intervals shall be applied by all Service Providers to disconnected TNs:

Table 1 – Telephone Number Aging Intervals

Class of Service	**Aging Interval in Months**	
	Minimum	**Maximum**
Residential	1	3
Business	3	12 *
* The 12 month maximum may be extended to 15 months if required to accommodate local directory publishing dates or high volume call-in applications, or to a longer period if required to accommodate changes to numbers associated with public service emergency applications. It may also be modified in the case of mobile networks where adequate justification is given.		

Reserved and Held numbers which are released by the customer from reserved or held status shall not be subject to aging.

5.6 CO Code Resource Utilization

Resource conservation and usage forecasting are very important to prevent a premature exhaust of CO Code capacity.

Since it is difficult to predict how the sector will develop for fixed line services, mobile services and other new services requiring CO Codes, URCA intends to monitor the CO Code usage by requiring network operators to submit a Telephone Number Utilization Report. This report, coupled with the required Months to Exhaust (MTE) form in COCAG, would allow URCA to properly audit TN utilization and evaluate requests for additional CO Codes.

When any type of numbering resource is not being used or is not being used in accordance with the relevant requirements, the resource will be reclaimed by URCA. The process for CO Code reclamation is set out in COCAG.

5.7 CO Code Audits

URCA may conduct CO Code Audits to determine the following, or any other relevant compliance issues under the NNP, the Comms Act or any relevant law:

i. compliance with the NNP and related rules;
ii. compliance with COCAG by Code Applicants and Code Holders;
iii. accurate utilization reporting by Service providers; and
iv. efficient and effective use of numbering resources by Code Applicants and Code Holders.

URCA will issue and enforce proportionate remedies, which may include reclamation of assigned resources, where any non-compliance is found during the audit.

5.8 Number Resource Utilization and Forecasting

To ensure adequate and efficient provisioning of numbering resources, URCA must plan for numbering usage over a reasonable period of time, and URCA considers a five year planning period to be appropriate for this purpose. To enable URCA to forecast the CO Codes that the various networks and service providers will require over the next five years, URCA will conduct an annual Number Resource Utilization and Forecasting (NRUF) survey to determine current utilization of numbering resources and aid with forecasting of future usage.

By reviewing the aggregated results of the NRUF, URCA would be able to forecast when The Bahamas NPA is expected to exhaust. Additionally, URCA will be able to compare each service provider's forecast for CO Codes with the actual requests for the assignment of CO Codes.

Service Providers that are assigned resources will be required to submit an annual report to URCA confirming detailing their utilization of resources. Where necessary, the Service Provider should also provide a forecasted need of future resources in accordance with the NRUF Guidelines (COCAG, Appendix E). All such submissions shall be treated as confidential, though aggregated data (not identifying any individual Service Provider) will be made public to enable industry planning.

URCA will annually provide NANPA with a five-year forecast for inclusion in the NANPA's analysis of NANP Exhaust. As stated above, to protect legitimate confidential information, only aggregated data will be provided to the NANPA.

5.9 CO Code Allocation Table

The following is the current Allocation Table for CO Codes under the 242 NPA.

Table 2 – CO Code Allocation Table

CO CODES	CURRENT ALLOCATIONS
0XX	Not Assignable Reserved for Future NANP Expansion Transition[9]
1XX	Not Assignable reserved for Future NANP Expansion Transition
2XX	Reserved for Growth[10]
3XX	Fixed Services Cellular Mobile Services
4XX	Cellular Mobile Services[11]
5XX	Cellular Mobile[12] 555 reserved for Directory Assistance
6XX	Fixed Services[13]
7XX	Reserved for Growth[14]
8XX	Reserved for Growth
9XX	Short Codes and Growth

[9]The 0/1 in the D-digit is not assignable in the current NANP and it has been reserved to be used for future NANP Expansion as an indicator during transition to an expanded NANP. See the INC *RECOMMENDED PLAN FOR EXPANDING THE CAPACITY OF THE NORTH AMERICAN NUMBERING PLAN (NANP)* at www.atis.org/inc

[10]2XX is reserved for future growth although one block has already been assigned to fixed Vanity Code services and fixed wire line services. No further assignments will be made in this range until further notice.

[11]The 4XX block is allocated to Cellular Mobile Services, although one CO code has been assigned to fixed services. No additional fixed services will be assigned in this code block.

[12]5XX block is assigned to cellular mobile services although there is one block already assigned to fixed services. The CO code 555 is reserved for National Directory Assistance services. No other fixed services will be assigned in 5XX.

[13]6XX is assigned to fixed services although there are two blocks already assigned to cellular mobile services. No other cellular mobile services will be assigned in 6XX.

[14]This block is reserved for future although there is one block assigned to fixed services and one block assigned to cellular mobile services. No further assignments will be made in this range until further notice.

5.10 CO Code Assignments

The following tables (Table 3 through Table 6) contain a summary table of the current CO Code assignments in The Bahamas.

5.10.1 CO Code Assignment for Fixed Services

Table 3: CO Code Assignment for Fixed Services

CO CODE ASSIGNMENTS	QUANTITY OF ASSIGNED CODES	TELEPHONE NUMBER CAPACITY
BTC Fixed Services	62	620,000
BTC Fixed Services 225-0/4 & 6/9 (1-242-225-5XXX has been assigned as a Vanity Code for use by all service providers)	1 Partial assignment to BTC	9,000 1,000
Short Codes & Domestic Toll Free	10	N/A
BTC Geographic Total	73	730,000
SRG Fixed Services	6	60,000
IPSI Fixed Services	1	10,000
Cable Bahamas Limited	2	20,000
TOTAL ASSIGNED CODES FOR FIXED SERVICES	82	820,000

5.10.2 Reserved CO Codes

CO Codes are reserved for a maximum period of 12 months with an option for an additional six month period. Reserved codes assigned for testing, must not be used for any commercial service and must be surrendered at the end of the reserved period. A separate application is required for each initial CO Code in a switching entity.

5.10.3 CO Code Assignments for Cellular Mobile Services

Table 4 – Cellular Mobile CO Code Assignments

CO CODE ASSIGNMENTS	QUANTITY OF ASSIGNED CODES	TELEPHONE NUMBER CAPACITY
BTC GSM Cellular Mobile Services	73	730,000
BTC CDMA Cellular Mobile Services	1	10,000
TOTAL ASSIGNED CODES FOR CELLULAR MOBILE SERVICES	74	740,000

5.10.4 CO Code Assignments for Special Services

Table 5 – Special Services CO Code Assignments

CO CODE ASSIGNMENTS	QUANTITY OF ASSIGNED CODES	TELEPHONE NUMBER CAPACITY
Domestic Toll Free Fixed Services for use by all service providers (1-242-300-XXXX)	1	10,000
Vanity Code Assignment Fixed Services for use by all service providers (1-242-225-5XXX)	Partial code assignment	1,000

5.10.5 Summary of Assigned CO Codes

Table 6 – Summary of Assigned CO Codes

CO SERVICE ASSIGNMENTS	QUANTITY OF CODES	TELEPHONE NUMBER CAPACITY
Assigned Codes for Fixed Services	82	820,000
Assigned Codes for Cellular Mobile Services	74	740,000
TOTAL	**156**	**1,560,000**
Reserved Codes for testing (Fixed Services)	0	0
Reserved Codes for N11, N00 & NYY Services	20	200,000

CO SERVICE ASSIGNMENTS	QUANTITY OF CODES	TELEPHONE NUMBER CAPACITY
Codes Reserved for Future	283	283,000
Available Unassigned Codes	**341**	**3,410,000**

5.10.6 CO Code Detailed Assignment Table

Table 7 - CO Code Summary Assignment Table

Index	CO Code	Service	Operator	Location
1	225	DID ("0-4", "6-9" thousand block)	BTC	New Providence
2	225	Vanity Code ("5" - thousand block)	Numbering Admin.	Bahamas
3	300	Domestic Toll Free	BTC/Shared	Bahamas
4	302	Fixed wire line	BTC	New Providence
5	321	Fixed wire line	BTC	New Providence
6	322	Fixed wire line	BTC	New Providence
7	323	Fixed wire line	BTC	New Providence
8	324	Fixed wire line	BTC	New Providence
9	325	Fixed wire line	BTC	New Providence
10	326	Fixed wire line	BTC	New Providence
11	327	Fixed wire line	BTC	New Providence
12	328	Fixed wire line	BTC	New Providence
13	329	Fixed wire line	BTC	North Andros
14	331	Fixed wire line	BTC	Rum Cay & San Sal
15	332	Fixed wire line	BTC	Eleuthera
16	333	Fixed wire line	BTC	Eleuthera
17	334	Fixed wire line	BTC	Eleuthera
18	335	Fixed wire line	BTC	Eleuthera
19	336	Fixed wire line	BTC	Exuma
20	337	Fixed wire line	BTC	Long Island
21	338	Fixed wire line	BTC	Long Island
22	339	Fixed wire line	BTC	Inagua/ Mayaguana
23	340	Fixed wire line	BTC	New Providence
24	341	Fixed wire line	BTC	New Providence
25	342	Fixed wire line	BTC	Cat Island
26	344	Fixed wire line	BTC	Acklins
27	345	Fixed wire line	BTC	Exuma
28	346	Fixed wire line	BTC	Grand Bahama
29	347	Fixed wire line	BTC	Bimini and Cat Cay
30	348	Fixed wire line	BTC	Grand Bahama

Index	CO Code	Service	Operator	Location
31	349	Fixed wire line	BTC	Grand Bahama
32	350	Fixed wire line	BTC	Grand Bahama
33	351	Fixed wire line	BTC	Grand Bahama
34	352	Fixed wire line	BTC	Grand Bahama
35	353	Fixed wire line	BTC	Grand Bahama
36	354	Fixed wire line	BTC	Cat Island
37	355	Fixed wire line	BTC	Exuma Cays
38	356	Fixed wire line	BTC	New Providence
39	357	GSM Cellular Mobile	BTC	National
40	358	Fixed wire line	BTC	Exuma
41	359	GSM Cellular Mobile	BTC	National
42	361	Fixed wire line	BTC	New Providence
43	362	Fixed wire line	BTC	New Providence
44	363	Fixed wire line	BTC	New Providence
45	364	Fixed wire line	BTC	New Providence
46	365	Fixed wire line	BTC	Abaco Island
47	366	Fixed wire line	BTC	Abaco Island
48	367	Fixed wire line	BTC	Abaco Island
49	368	Fixed wire line	BTC	Andros
50	369	Fixed wire line	BTC	Andros
51	373	Fixed wire line	BTC	Grand Bahama
52	374	Fixed wire line	BTC	Grand Bahama
53	375	GSM Cellular Mobile	BTC	National
54	376	Fixed wire line	BTC	Grand Bahama
55	377	Fixed wire line	BTC	New Providence
56	380	Fixed wire line	BTC	New Providence
57	381	Fixed wire line	BTC	New Providence
58	382	Fixed wire line	BTC	New Providence
59	383	Fixed wire line	BTC	New Providence
60	384	Fixed wire line	BTC	New Providence
61	392	Fixed wire line	BTC	New Providence
62	393	Fixed wire line	BTC	New Providence
63	394	Fixed wire line	BTC	New Providence
64	395	GSM Cellular Mobile	BTC	National
65	396	Fixed wire line	BTC	New Providence
66	397	Fixed wire line	BTC	New Providence
67	421	GSM Cellular Mobile	BTC	National
68	422	GSM Cellular Mobile	BTC	National
69	423	GSM Cellular Mobile	BTC	National
70	424	GSM Cellular Mobile	BTC	National
71	425	GSM Cellular Mobile	BTC	National

Index	CO Code	Service	Operator	Location
72	426	GSM Cellular Mobile	BTC	National
73	427	GSM Cellular Mobile	BTC	National
74	428	GSM Cellular Mobile	BTC	National
75	429	GSM Cellular Mobile	BTC	National
76	431	GSM Cellular Mobile	BTC	National
77	432	GSM Cellular Mobile	BTC	National
78	433	GSM Cellular Mobile	BTC	National
79	434	GSM Cellular Mobile	BTC	National
80	435	GSM Cellular Mobile	BTC	National
81	436	GSM Cellular Mobile	BTC	National
82	437	GSM Cellular Mobile	BTC	National
83	438	GSM Cellular Mobile	BTC	National
84	439	GSM Cellular Mobile	BTC	National
85	441	GSM Cellular Mobile	BTC	National
86	442	GSM Cellular Mobile	BTC	National
87	443	GSM Cellular Mobile	BTC	National
88	445	GSM Cellular Mobile	BTC	National
89	446	GSM Cellular Mobile	BTC	National
90	447	GSM Cellular Mobile	BTC	National
91	448	GSM Cellular Mobile	BTC	National
92	449	GSM Cellular Mobile	BTC	National
93	451	GSM Cellular Mobile	BTC	National
94	452	GSM Cellular Mobile	BTC	National
95	453	GSM Cellular Mobile	BTC	National
96	454	GSM Cellular Mobile	BTC	National
97	455	GSM Cellular Mobile	BTC	National
98	456	GSM Cellular Mobile	BTC	National
99	457	GSM Cellular Mobile	BTC	National
100	458	GSM Cellular Mobile	BTC	National
101	461	Fixed wire line	BTC	New Providence
102	462	GSM Cellular Mobile	BTC	National
103	463	GSM Cellular Mobile	BTC	National
104	464	GSM Cellular Mobile	BTC	National
105	465	GSM Cellular Mobile	BTC	National
106	466	GSM Cellular Mobile	BTC	National
107	467	GSM Cellular Mobile	BTC	National
108	468	GSM Cellular Mobile	BTC	National
109	470	GSM Cellular Mobile	BTC	National
110	471	GSM Cellular Mobile	BTC	National
111	472	GSM Cellular Mobile	BTC	National
112	473	GSM Cellular Mobile	BTC	National

Index	CO Code	Service	Operator	Location
113	474	GSM Cellular Mobile	BTC	National
114	475	GSM Cellular Mobile	BTC	National
115	476	GSM Cellular Mobile	BTC	National
116	477	GSM Cellular Mobile	BTC	National
117	478	GSM Cellular Mobile	BTC	National
118	479	GSM Cellular Mobile	BTC	National
119	481	CDMA Cellular Mobile	BTC	National
120	502	Fixed wire line	BTC	National
121	524	GSM Cellular Mobile	BTC	National
122	525	GSM Cellular Mobile	BTC	National
123	533	GSM Cellular Mobile	BTC	National
124	535	GSM Cellular Mobile	BTC	National
125	544	GSM Cellular Mobile	BTC	National
126	551	GSM Cellular Mobile	BTC	National
127	552	GSM Cellular Mobile	BTC	National
128	553	GSM Cellular Mobile	BTC	National
129	554	GSM Cellular Mobile	BTC	National
130	556	GSM Cellular Mobile	BTC	National
131	557	GSM Cellular Mobile	BTC	National
132	558	GSM Cellular Mobile	BTC	National
133	559	GSM Cellular Mobile	BTC	National
134	565	GSM Cellular Mobile	BTC	National
135	577	GSM Cellular Mobile	BTC	National
136	601	Fixed Services	CBL	New Providence
137	602	Fixed Services	CBL	Grand Bahama
138	612	Fixed Services	IPSI	National Fixed Services
139	636	GSM Cellular Mobile	BTC	National
140	646	GSM Cellular Mobile	BTC	National
141	676	Fixed Services	SRG	New Providence
142	677	Fixed Services	SRG	New Providence
143	687	Fixed Services	SRG	Grand Bahama
144	688	Fixed Services	SRG	Grand Bahama
145	698	Fixed Services	SRG	Abaco
146	699	Fixed Services	SRG	Abaco
147	702	Fixed wire line	BTC	New Providence
148	727	GSM Cellular Mobile	BTC	National

5.11 Easily Recognizable Codes

A set of Easily Recognizable Codes (ERC) have been allocated for easy customer recognition of services accessed within their own exchange area, for which they might incur charges. These codes are such that the end user is likely to avoid using them because of misunderstanding and the high possibility of misdials. These codes are reserved for national service applications.

CO Codes in the format of N00, N11 and NYY are allocated as ERCs and are therefore reserved for national service applications.

"N00" central office codes are those where "N" is equal to any digit between 2 to 9. Examples of such codes are: 300, 400 and 500.

N11 central office codes are those where "N" is equal to any digit between 2 to 9. Examples of such codes are: 211, 311, 411, …, 911.

"NYY" central office codes are those where "N" is equal to any digit between 2 to 9; and "YY" is a duplicate numbering resource and is of the same numeric value as the "N-digit". Examples of such codes are: 222, 333 and 444.

N00, N11 and NYY central office codes are reserved for special services. Table 8 contains a list of the ERC central office codes currently assigned:

Table 8 – Easily Recognizable Codes

Central Office Code	Format	Assigned Service
300	N00	National Domestic Toll Free Services
333	NYY	Geographic Fixed Line Services
555	NYY	Reserved for National Directory Services
711	N11	Reserved for Telecommunication Relay Services (TRS)
911	N11	Emergency Services
999	NYY	Station DN Identification (on-net)

All other ERC in the N00, N11 and NYY formats are reserved for future assignments.

5.12 Short Codes

Abbreviated dialing is the use of a code set whose length is less than that which is dialed for a local call within an NPA, known as a "short code". Short codes uniquely and unambiguously determine the intended destination and routing of the call. They have become very popular for two types of applications:

i. services in the public interest such as emergency services and directory operator information service; and
ii. services with a nationwide appeal for dialing a uniform abbreviated access anywhere in the country such as information services and, weather and road conditions.

The NNP for The Bahamas has adopted the NANP standard where the "*" is used for access to services, although many services have already been introduced with the "*" symbol, e.g., Vertical Service Codes.

9XX is reserved for short code use in the NNP as detailed in Table 9.

CO codes in the 9XXNXX range are reserved for short codes in this NNP. The 1XX NXX range is reserved for future short code considerations.

The NNP is structured so that all short codes will be of the same format so that the dialing plan would be easy to use and understood to eliminate frequent and potentially annoying misdials, call abandonment and service underutilization by end users.

URCA has defined three categories of codes for use with special services:
i. public interest;
ii. common; and
iii. service provider specific.

5.12.1 Public Interest

The identification and dialing of public interest short codes should be consistent across all networks and should be capable of being dialed and completed from any telephone within The Bahamas. Access to emergency services is a good example of the public interest category.

911 and 919 have already been assigned police, emergency, and fire services in The Bahamas.

5.12.2 Common

This set of short codes for common service includes Vertical Service Codes (VSC). However, other common type services, e.g., voicemail access, could use different code sets across the networks. Service providers are required to follow COCAG when short codes are to be use in their networks.

5.12.3 Service Provider Specific

Not all services are in the public interest or common. Therefore, a set of short codes have been allocated for use by each service provider to offer network specific type services. These are included in the Vertical Service Code Assignment Table in the range "*94 through *99".

URCA notes that these are general guidelines and service provider specific services that may have to be periodically re-evaluated and categorized as common services, as necessary.

5.12.4 Short Code Assignment Table

Table 9 sets out the short codes that have been allocated for use by all network operators, for on-net and off-net services:

Table 9 – Short Codes (All operators)

Short Code	Service	Routing Characteristics
911/919	Emergency[15]	On-net for BTC; other operators would route the service to BTC for termination to the Police emergency services. This service is also used in The Bahamas to reach other emergency services.
910	Telegraph Department	on-net for all operators
914	Telephone Repair (Complaints)	on-net for all operators
915	Weather	on-net for all operators
916	Directory Assistance (Local)	on-net for all operators
917	Time Announcements	on-net for all operators
918	Telephone Repair (Maintenance)	on-net for all operators
999	Station DN Identification	on-net for all operators

The following N11 codes have been assigned as public interest services for national use.

Table 10 – Short Codes for Public Interest Use

Short Code	Service	Routing Characteristics
911	Emergency Services	On-net for BTC; other operators would route the service to BTC for termination to the emergency services.
711	Telecommunications Relay Service	On-net/off-net

[15]Some service providers also route 112 to Emergency Services as a courtesy to tourists since it is widely used in Europe to reach emergency services. This is an informal accommodation that will be permitted until such time as the use of 0/1 in the leading digit of the NXX code (the d-digit) is needed to be used for NANP Expansion transition.

	(TRS)	

All other N11 short codes will be allocated as "Reserved Codes" to be assigned by URCA on a case by case basis, according to demand and applicable guidelines. The following are the short code assignment in the U.S. and Canada and such could be considered for future implementation in The Bahamas:

211 Community Information and Referral Services (US)
311 Non-Emergency Police and Other Governmental Services (US)
411 Local Directory Assistance
511 Traffic and Transportation Information (US); Reserved (Canada)
611 Repair Service
711 Telecommunications Relay Service (TRS)
811 Business Office
911 Emergency

5.13 Vertical Service Codes

Vertical Service Codes (VSCs) are customer-dialed codes in the *XX or *2XX dialing format for touch devices (i.e. touch-tone fixed, mobile and other devices which have a * button) and the 11XX or 112XX dialing format for rotary phones. They are used to provide customer access to features and services (e.g., call forwarding, automatic call-back, etc.) provided by Service Providers for example, Call Forwarding is activated by dialing *72 or 1172.

VSCs are assigned to features or services to enable consistent accessibility throughout the PSTN. The purpose of common/standard VSCs is to minimize customer confusion and provide a standard service access approach for features and services within multiple individual networks (multi-network applications).

There are three types of VSCs:

i. Inter-network application (VSC) - A Vertical Service Code used to provide access to a feature or service that requires multiple individual networks to act upon the code in a consistent manner on a given call. The code must have the same meaning to more than one public switched telephone network on a single call. For example, a call originates from a service provider's network, and is terminated on another network. An inter-network VSC dialed by the originating caller would be understood by each network involved with the call and acted upon within an individual network accordingly.
ii. Intra-network application (VSC) - A vertical Service Code used to access a feature or service within an individual network provider's network. The use of this code is internal to a particular network. It does not require a standard assignment, nor is it dependent on a standardized assignment process.

iii. Multi-network application (VSC) - A Vertical Service Code used to provide access to a feature or service that is common across more than one network. Multiple networks use the same code to access the same service. (There is no interaction between networks.) This allows for consistent accessibility throughout the PSTN of a feature or service. For example, Call Forwarding is a multi-network application since it is a service that is provided by several local exchange carrier providers.

VSCs may be assigned for use across and/or among two or more networks on an inter-network basis (inter-network applications), where multiple networks must act upon a VSC in a consistent manner on a given call. Such assignments are to be made using the same VSC resource, but will be identified separately from multi-network applications. Proprietary single network applications (intra-network applications), within an individual network, is at the sole discretion and determination of the individual network.

Network providers will have the option of using VSCs assigned according to the Industry Numbering Committee (INC) Vertical Service Code Assignment Guidelines[16] and listed in the NNP below and in doing so will be responsible for making any necessary changes or modification to networks or dialing instructions to accommodate code usage. Network providers will not act upon an end-user dialed VSC, passed to an interconnecting network, either before or after call answer, unless the call process is included in an interconnection or commercial agreement.

Future VSC assignments are to be made by the NANPA in accordance with the INC Vertical Service Code Assignment Guidelines.

Applications for assignments of VSCs are to be made through URCA for submission to NANPA. The same VSC may be assigned for both a multi-network and inter-network application. It is recognized that the use of a given code for both a multi-network and inter-network application may result in conflicts, and it is the responsibility of the Requester to take the necessary steps to avoid conflicts in the associated networks. Currently approved VSCs are listed in Table 11 below.

Table 11 – Vertical Service Codes

VSC	Service
*00	Inward Voice Activated Service (English)
*01	Inward Voice Activated Service (French)
*02	Deactivation/Activation of In-Service Activation (ISA) on a per line basis
*03	Deactivation of In-Service Activation (ISA) on a per call basis
*09	Selective Call Blocking/Reporting
*2X	Reserved for expansion to 3 digit VSCs

[16] Available from the Alliance for Telecommunications Industry Solutions at www.atis.org/atis/clc/INC/Incdocs.htm

VSC	Service
*228	Over-the-Air Service Provisioning
*272	Access Wireless Priority Service
*3X	Reserved for expansion to 3-digit VSCs
*40	Change Forward- To Number for Customer Programmable Call Forwarding Busy Line
*41	Six-Way Conference Calling Activation
*42	Change Forward- To Number for Customer Programmable Call Forwarding Don't Answer
*43	Drop last member of Six-Way Conference Call
*44	Voice Activation Dialing
*45	Voice Dialing Extended Dial Tone
*46	French Voice Activation Network Control
*47	Override Feature Authorization
*48	Override Do Not Disturb
*49	Long Distance Signal
*50	Voice Activation Network Control
*51	Who Called Me?
*52	Single Line Varity Package (SVP) – Call Hold
*53	Single Line Varity Package (SVP) – Distinctive Ring B
*54	Single Line Varity Package (SVP) – Distinctive Ring C
*55	Single Line Varity Package (SVP) – Distinctive Ring D
*56	Change Forward- To Number for ISDN Call Forwarding
*57	Customer Originating Trace
*58	ISDN MBKS Manual Exclusion Activation
*59	ISDN MBKS Manual Exclusion Deactivation
*60	Selective Call Rejection Activation
*61	Distinctive Ringing/Call Waiting Activation
*62	Selective Call Waiting
*63	Selective Call Forwarding Activation
*64	Selection Call Acceptance Activation
*65	Calling Number Delivery Activation
*66	Automatic Callback Activation
*67	Calling Number Delivery Blocking
*68	Call Forwarding Busy Line/Don't Answer Activation
*69	Automatic Recall Activation
*70	Cancel Cal Waiting
*71	Usage Sensitive Three-way Calling
*72	Call Forwarding Activation
*73	Call Forwarding Deactivation

VSC	Service
*74	Speed Calling 8 – Change List
*75	Speed Calling 30 – Change List
*76	Activated Call Waiting Deluxe
*77	Anonymous Call Rejection Activation
*78	Do Not Disturb Activation
*79	Do Not Disturb Deactivation
*80	Selection Call Rejection Deactivation
*81	Distinctive Ringing/Call Waiting Deactivation
*82	Line Blocking Deactivation
*83	Selection Call Forwarding Deactivation
*84	Selection Call Acceptance Deactivation
*85	Calling Number Delivery Deactivation
*86	Automatic Callback Deactivation
*87	Anonymous Call Rejection Deactivation
*88	Call Forwarding Busy Line/Don't Answer Deactivation
*89	Automatic Recall Deactivation
*90	Customer Programmable Call Forwarding Busy Line Activation
*91	Customer Programmable Call Forwarding Busy Line Deactivation
*92	Customer Programmable Call Forwarding Don't Answer Activation
*93	Customer Programmable Call Forwarding Don't Answer Deactivation
*94	Reserved For Local Assignment
*95	Reserved For Local Assignment
*96	Reserved For Local Assignment
*97	Reserved For Local Assignment
*98	Reserved For Local Assignment
*99	Reserved For Local Assignment

5.14 Other Service Codes

Other codes are allocated for services across electronic communications networks. These are in the format of "XX#".

CLASS Service Codes

70# Call Waiting Disable
72# Call Forwarding (Enable)
73# Call Forwarding (Disable)
74# Speed Calling (programming/de-programming)
75# Speed Calling (programming)

5.15 Toll Free Services

Toll Free Services in this section are the same services classified as Free Phone services in other countries.

5.15.1 Domestic Toll Free Services

The 300 CO Code (1-242-300-XXXX) has been allocated to be used by all service providers for domestic toll free services. This CO code is currently assigned to the BTC network and BTC will be required to route traffic for Other Licensed Operators (OLOs) and their customers in accordance with BTC's URCA approved RAIO.

Each OLO would be required to apply to URCA for TNs out of the code and these numbers will be assigned to them on a first-come, first-served basis.

URCA may consider conducting a review of the administration of this resource, if needed based on feedback from stakeholders.

5.15.2 International Toll Free Services

The Bahamas was among other countries in the Country Code 1 block that was assigned a NXX code out of the 800 Toll-Free Service NPA Code. The CO code 389 was assigned when BTC was the monopoly operator and was being used for international toll free services.

OLOs will now have access to the TNs in this code to provide services to their customers, and URCA will administer the resources in the code for TN assignments to all network operators in The Bahamas.

URCA may consider conducting a review of the administration of this resource, if needed based on feedback from stakeholders.

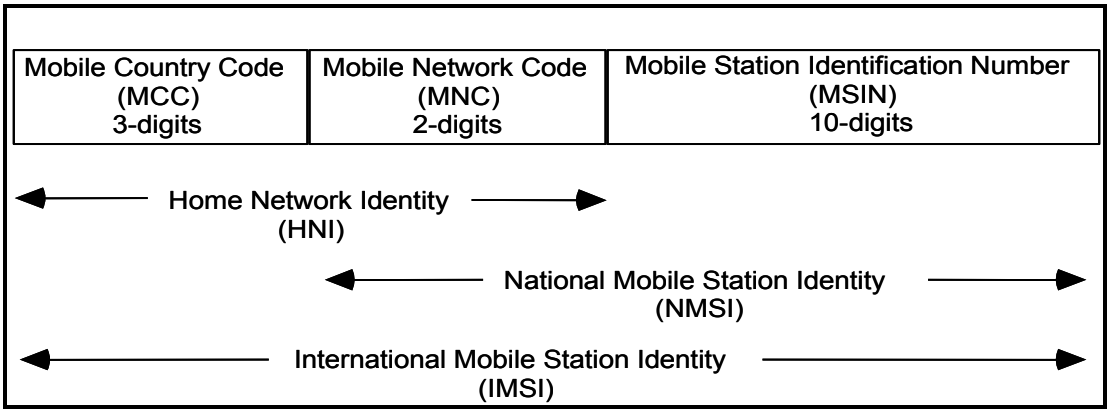
6. International Mobile Subscriber Identity

The International Mobile Subscriber Identity (IMSI) enables mobile terminals/users to roam among networks, domestically and internationally, by providing a uniform and unique home network and mobile terminal/user identification that is recognizable by all conforming networks. When transmitted between visited and home networks, the IMSI enables the exchange of subscription and billing information for the visiting mobile subscriber.

Specifically, the IMSI is used for:

- determination of the mobile terminal's/user's home mobile network;
- mobile terminal/user identification when information about a specific mobile terminal/user is to be exchanged between visited and home networks;
- mobile station identification on the radio control path for registering a mobile station in a visited mobile network;
- mobile station identification for signaling on the radio control path;
- identification of the mobile terminal/user to allow for charging and billing of visiting mobile terminals/users; and
- subscription management (i.e., retrieving, providing, changing, and updating subscription data for a specific mobile terminal/user).

The format of the IMSI in The Bahamas is:



The IMSI format in The Bahamas is a fixed 15-digit length, the maximum allowable by the ITU Recommendation E.212 *The international identification plan for public networks and subscriptions*. Each IMSI contains a Mobile Country Code (MCC), a Mobile Network Code (MNC), and a Mobile Station Identification Number (MSIN) and is in the following format:

MCC	MNC	MSIN
NXX	XX	XXX XXX XXXX
364	XX	XXX XXX XXXX

This format permits up to 100 operators to be assigned a Mobile Network Code (within the range 00 through 99), under the MCC assigned to The Bahamas.

MNCs in The Bahamas are two digits in length. The MNC is the segment of the IMSI directly administered by URCA and will only be assigned to public networks offering mobility services with international roaming capability.

BTC has already been assigned the MNC 39.

MSINs are ten digits in length and are administered directly by the network operator to which the MNC is assigned.

The IMSI Assignment Guidelines are included in Appendix 2.

7 Domestic Point Codes

Telcordia is responsible for the administration and assignment of Signaling System No. 7 (SS7) point codes in NANP countries.

SS7 networks use Point Codes to identify network signaling nodes for call routing purposes. These Point codes are set up such that the:

1. first three decimal digits represent the Network Identification;
2. second three decimal digits represent the Network Cluster; and
3. third three decimal digits represent the Cluster Member.

Service Providers can be assigned a Large Network Code, a Small Network Code or a Point Code Block. See www.ss7pcadmin for more information.

Service Providers in The Bahamas are required to apply for these point codes through URCA.

8. Signaling Area/Network Codes

8.1 International Signaling Point Codes

Signaling Area Network Codes (SANC) are assigned to ITU Member States by the ITU Director of the Telecommunication Standardisation Bureau (TSB). The SANC contains 8 International Signaling Point Codes (ISPC) which may be assigned by URCA to networks operated in The Bahamas.

Signaling point codes for the national level and the international level are assigned separately. The assignment of a point code in a national network does not automatically entitle the code holder to an International Signaling Point Codes (ISPC).

ISPC are 14 bit binary codes used to establish direct SS7 signaling links and interconnection with international networks.

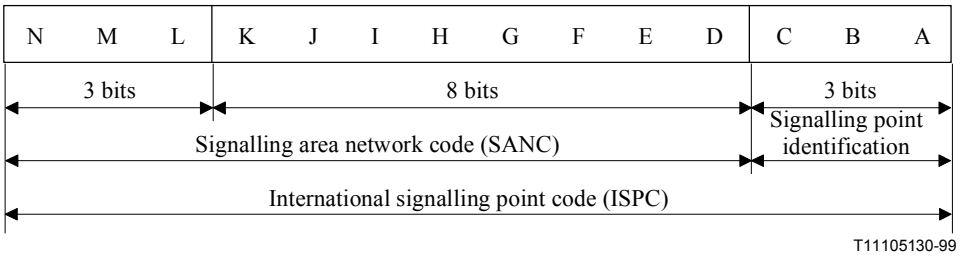
The 14 bit code of the ISPC is represented by three decimal numbers in the format: X-XXX-X as follows:

1. The first decimal indicating the three (3) most significant bits (NML) with a range between 0 and 7.
2. The second decimal indicating the following eight (8) bits (K-D), with a range of 000 to 255.
3. The third decimal consisting of the three (3) least significant bits (CBA), with a range of 0 to 7.

The combination of the fields containing bits NML and bits K-D is regarded as the SANC.

The three (3) bits (CBA) identify a specific signaling point which when combined with the SANC forms the 14-bit ISPC (e.g. 2-068-1).

This is illustrated in the following figure.



Format of the International Signaling Point Code (ISPC)

The three (3) bits (CBA) identify a specific signaling point which when combined with the SANC forms the 14-bit ISPC.

The Bahamas has been assigned Service Area/Network Code (SANC) 3-128.

Within the SANC there are 8 International Signaling Point Codes ranging from 3-128-0 up to and including 3-128-7. Assignments to successful applicants may be made from this range.

Signaling Point Codes out of the SANCs assigned to The Bahamas by the TSB shall be used only in The Bahamas. Similarly, ISPCs from SANC assigned to countries other than The Bahamas, shall not be used in The Bahamas.

8.2 ISPC Assignment Criteria

URCA will assign ISPC in The Bahamas in accordance with ITU Recommendation Q708 SWITCHING AND SIGNALLING Specifications of Signaling System No. 7 – Message transfer part (MTP) and the ISPC Assignment Guidelines. All applications for ISPC resources are to be submitted to URCA for processing.

8.3 ISPC Assignment Table

The following table shows the current ISPC assignments for The Bahamas.

Table 12 – ISPC Assignment Table

ISPC	Decimal	Unique Name of the signaling Point	Name of the signaling Point Operator
3-128-0	7168	Central Four	Bahamas Telecommunications Company Ltd.
3-128-1	7169	Eight Mile Rock	Bahamas Telecommunications Company Ltd.

ISPC	Decimal	Unique Name of the signaling Point	Name of the signaling Point Operator
3-128-2	7170	Soldier road	Bahamas Telecommunications Company Ltd.
3-128-3	7171	Unassigned	unassigned
3-128-4	7172	unassigned	unassigned
3-128-5	7173	unassigned	unassigned
3-128-6	7174	unassigned	unassigned
3-128-7	7175	unassigned	Unassigned

9. Carrier Access Codes

The Carrier Access Code (CAC) is a dialing sequence used by the end user to access a preferred provider of service. This service is sometimes referred to as carrier pre-selection. The Carrier Identification Code (CIC) forms part of the CAC.

CICs provide routing and billing information for calls from end users via trunk-side connections to interexchange or international carriers and other entities. Entities connect their facilities to access provider's facilities using several different access arrangements, the common ones being Feature Group B (FG B) and Feature Group D (FG D). Access providers are common carriers and connecting carriers that provide interconnection services between an entity and another provider of electronic communications services. The most common is FGD access.

The originating network uses the CIC code to route the call to the desired destination.

The NANPA administers the assignment and management of CICs, however all applications for a CIC must to be sent to URCA for submission to NANPA.

10. System Identifier Codes

System Identifier Codes ("SIDs") are assigned to cellular and PCS mobile networks as a unique identifier of the geographic market or network. SIDs are 15 bit numbers that equate to one to five digit decimal numbers that are used in the communications between mobile terminals and base stations to determine home or roam status. The network or geographic SID is programmed into the mobile terminal to detect whether the unit is within the Home network or is roaming.

The SID range 8080 to 8095 was assigned to Bahamas by IFAST that is the International Forum on AMPS Standards Technologies, sponsored by the Alliance for Telecommunications Industry Solutions (ATIS). This SID range provides The Bahamas with the capacity to identify 16 mobile networks.

URCA is responsible for the assignment of SIDs in The Bahamas.

The following table shows SID assignments in The Bahamas:

Table 13 – System Identifier Codes

	SID CODE	CODE STATE[17]	NETWORK OPERATOR	TYPE OF SERVICE	SERVICE AREA[18]
1	**8080**	Assigned	BTC	CDMA Cellular Mobile Services	Sections of: New Providence, Grand Bahama, Bimini, Eleuthera & Exuma
2	**8081**	Un-assigned			
3	**8082**	Un-assigned			
4	**8083**	Un-assigned			
5	**8084**	Un-assigned			
6	**8085**	Un-assigned			
7	**8086**	Un-assigned			
8	**8087**	Un-assigned			
9	**8088**	Un-assigned			
10	**8089**	Un-assigned			

[17] A Code Status may be: Un-assigned; Assigned; Dormant; or Conflict.
[18] Service Area describes the geographic area(s) served by the system.

	SID CODE	CODE STATE[17]	NETWORK OPERATOR	TYPE OF SERVICE	SERVICE AREA[18]
11	**8090**	Un-assigned			
12	**8091**	Un-assigned			
13	**8092**	Un-assigned			
14	**8093**	Un-assigned			
15	**8094**	Un-assigned			
16	**8095**	Un-assigned			

Glossary of Acronyms

BIRRDS	TRA Business Integrated Routing and Rating Database (section 5.3)
CAC	Carrier Access Code (section 9)
CO Code	Central Office Code (the “DEF” digits)
COCAG	Central Office Code Assignment Guidelines
CPE	Customer Premises Equipment
ERC	Easily Recognizable Codes (section 5.11)
IMSI	International Mobile Station Identifier (section 6)
ISPC	International Signaling Point Code (section 8)
MCC	Mobile Country Code (section 6)
MNC	Mobile Network Code (section 6)
MSIN	Mobile Station Identification Number (section 6)
MTE	Months To Exhaust (section 5.6)
NANP	North American Numbering Plan
NANPA	North American Numbering Plan Administration
NNP	The Bahamas National Numbering Plan
NPA	Numbering Plan Area Code (the “ABC” digits)
NRUF	Numbering Resource Utilization and Forecasting survey (section 5.8)
POI	Point of Interconnection
SANC	Signaling Area/Network Code (section 8)
SID	System Identifier code (section 10)
TN	Telephone number
TRA	Telcordia Routing Administration (section 5.3)
VSC	Vertical Service Code (section 5.13)

List of Appendices

Appendix 1: **Central Office Code Assignment Guidelines (COCAG)**

Appendix 2: **IMSI Assignment Guidelines**

Appendix 3: **SANC – ISPC Assignment Guidelines**

The Bahamas National Numbering Plan

Appendix 1 – Central Office Code Assignment Guidelines

12 August 2011

CONTENTS

1.0 Purpose and Scope

These Central Office Code Assignment Guidelines (Guidelines) were developed for the administration of Central Office Codes (CO Codes) within The Bahamas. The purpose of these Guidelines is to provide direction to the Administrator, Code Applicants, and Code Holders with respect to the administration, assignment, activation, and use of CO Codes and the numbering resources described therein.

These Guidelines apply throughout The Bahamas subject to the Electronic Communications Sector Policy of The Bahamas and the electronic communications regulatory regime. URCA is the regulator for the electronic communications sector under the Communications Act 2009 (Comms Act) which establishes URCA as the administrator of numbering resources, including but not limited to CO Codes.

In the North American Numbering Plan (NANP), with which The Bahamas complies, each digit is identified by an alphabetical character in the order ABC-DEF-GHIJ. The NANP structure consists of a 3-digit NPA (ABC), 3-digit CO Code (DEF) and 4-digit Line Number (GHIJ) in the format NXX-NXX-XXXX where: N = 2 to 9 and X = 0 to 9) (e.g., 740 is the CO Code in 242-740-1111). Examples of uses for CO Codes for which these Guidelines apply are electronic communications services such as public telephony, Centrex, Direct Inward Dialing (DID), cellular mobile service, pagers, data lines, facsimile, public payphones, and customer owned pay phones.

2.0 Assumptions and Constraints

The development of these Guidelines includes the following assumptions and constraints:

2.1 NANP resources, including those covered in these Guidelines, are managed by the NANP Administration (NANPA), The Bahamas National Numbering Plan Administrator which is URCA, and numbering resource assignees (e.g., CO Code Holders), based upon administration guidelines established by the relevant NANP regulatory authorities.

2.2 NANP resources are public resources and are therefore not owned by the assignees. It is prohibited for any assignee to sell, broker, barter, or lease any NANP resource except with the written approval of URCA or in a manner consistent with URCA's direction. Where a resource is sold, brokered, bartered, or leased for a fee without URCA's approval or in a manner inconsistent with URCA's direction, the resource is subject to reclamation. In the event that a business or portion of a business is merged with another business or acquired by other means, the merger or acquisition should not prohibit the transfer of a CO Code to the party acquiring the business or portion of the business. As per section 6.3.2 of these Guidelines, the holder of a CO Code (i.e., the Code Holder) assigned by URCA or acquired by other means such as transfer (i.e., by merger or acquisition) must use the CO Code consistent with these Guidelines. When a CO Code is transferred from one entity (i.e., the original Code Holder) to another, as a result of a business or portion of a business being merged or acquired by another entity, the original Code Holder must advise URCA of the transfer of the CO Code to the entity acquiring the business or portion thereof.

2.3 NANP resources shall be assigned to permit the most effective and efficient use of a finite numbering resource in order to prevent premature exhaust of the NANP thereby delaying the need to develop and implement new numbering plans. Efficient resource management and CO Code conservation are necessary due to the impacts of expanding the numbering resource (e.g., NANP expansion from 10 to 12 digits[1]). Such impacts would include:

- Customer impacts (e.g., dialing, changes to advertising and stationery, etc.);
- CPE modifications;
- Domestic and international switching and terminal hardware and software modifications;
- Operational support systems modifications; and,
- Reprogramming of non-electronic communications data bases that contain telephone numbers.

2.4 These Guidelines address the assignment and administration of CO Codes including the entry of routing and rating data into the Telcordia Business Integrated Routing & Rating Database

[1] See the Alliance for Telecommunications Industry Solutions (ATIS) Industry Numbering Committee (INC) which is the responsible Standards Develop Organization (SDO) for NANP technical standards has an expansion plan: "Recommended Plan for Expanding the Capacity of the North American Numbering Plan" <http://www.atis.org/inc/increp.asp>

System (BIRRDS). The entry of routing and rating data into the NANP industry database system is required in order to notify the industry via the Telcordia Routing Administration (TRA) industry notification outputs such as the LERG™ Routing Guide and the TPM™ Data Source as well as the NPA/NXX Vertical and Horizontal Coordinates Data (VHCD). Implementation of the technical changes in the network and the associated responsibilities required by these assignments is beyond the scope of these Guidelines and is the responsibility of the affected electronic communications service providers and users.

2.5 The Code Applicant must be licensed in The Bahamas and must demonstrate, in the manner determined by URCA, that all applicable licenses and regulatory approvals required to provide the service for which the CO Code have been obtained.

2.6 URCA seeks in these Guidelines to provide the maximum feasible latitude in the provision of electronic communications services while effectively managing a finite resource.

2.7 URCA reserves the right to modify these Guidelines if and when number portability is implemented in The Bahamas.

2.8 URCA may perform audits in relation to the CO Code assignment process to ensure: (a) compliance with these Guidelines by Code Applicants, and Code Holders; and (b) the efficient and effective use of numbering resources by Code Applicants and Code Holders.

2.9 A Code Applicant is generally not required to provide any additional explanation or justification of items that he/she has certified. However, certification alone may not provide URCA with sufficient information upon which to make a decision regarding CO Code assignment. Accordingly, additional dialog between the Code Applicant and URCA may follow; however, URCA is still required to reply to CO Code requests within 14 calendar days of receipt.

2.10 Code Applicants and Code Holders must obtain a Company Code for use as Operating Company Numbers (OCN), Revenue Accounting Office Codes (RAO) and Common Language Location Identifier (CLLI) Codes, and comply with the requirements for the assignment and use of such codes for entry of routing and rating data into the NANP industry databases. These are obtained from the TRA.

3.0 Assignment Principles

The following assignment principles apply to all aspects of these Guidelines:

3.1 CO Codes, as part of NANP telephone numbers, are to be assigned only to identify initial destination addresses in the Public Switched Telephone Network (PSTN)[2], not addresses within private networks.

3.2 CO Codes are a finite resource that should be used in the most effective and efficient manner possible. All Code Applicants are required to comply with these Guidelines as a pre-requisite to obtaining CO Codes.

3.3 Information required from the Code Applicants in support of CO Code assignment will be kept to a minimum, uniform for all "Code Applicants", treated as proprietary, and adequately safeguarded by URCA. Information required for input into the appropriate electronic communications industry routing and rating database systems (e.g., Telcordia BIRRDS) will become available to the industry upon input into those systems.

3.4 CO Codes shall be assigned in a fair and impartial manner to any Code Applicant that meets the criteria for assignment as detailed in Section 4.0.

3.5 CO Code Applicants must comply with all applicable electronic communications sector regulations or URCA instructions that apply to the services that they wish to provide.

3.6 CO Code assignments for geographic numbering purposes within geographic NPAs may be any 3 digit series in the format NXX (where N is any digit between 2 - 9 and X is any digit between 0 – 9), except for the unassignable codes below:

- any N11 Service Code reserved for Service Codes (i.e., 211, 311, 411, 511, 611, 711, 811, 911);
- any N00 NXX code reserved as Service Codes (i.e., 200, 300, 400, 500, 600, 700, 800, and 900);
- any codes allocated or assigned for special purposes e.g. 555 reserved for information services;
- 950 for future services;
- 976 for future services;
- Local Plant Test Codes (e.g., 958 and 959); and
- Easily Recognizable Codes (ERCs): Any NYY NXX CO Codes that have the same numerical value in each position; 222, 333, 444, etc.

[2] In this context, the term PSTN refers to all public telephone networks including mobile networks, fixed wireless

4.0 Criteria for the Assignment and Reservation of Central Office Codes

CO Codes shall be assigned to and reserved by network operators on a first-come, first-served basis. The criteria in the following sections shall be used by URCA in reviewing requests for CO Code assignments and reservations from network operators for "Initial Codes", "Additional Codes" and "Plant Test Codes" (see Glossary):

4.1 Assignment of an Initial Code will be to the extent required to terminate PSTN traffic as authorized or permitted by URCA, and provided all the criteria in Sections 4.1.1 through 4.1.5 are met.

4.1.1 An Initial Code assignment will be based on identification of a new switching entity, physical Point of Interconnection (POI), or unique Exchange Area Rate Center[3] (Island, settlement) consistent with regulatory requirements. Utilization criteria or projection will not be used to justify an Initial Code assignment.

4.1.2 The Code Applicant must submit a Request for CO Code Assignment Form (Form N1 (Part 1)) certifying that a need exists for a CO Code assignment. Applications may be sent via e-mail to the designated URCA address, but a signed application must be received by the Administrator prior to any assignment being made.

4.1.3 The Code Applicant must be licensed to operate in The Bahamas and must demonstrate that all applicable regulatory approvals required to provide the service for which the CO Code is requested have been obtained. An application for an Initial Code must include documentation demonstrating that the Code Applicant is authorized by URCA to receive a CO Code assignment in The Bahamas for which it is requesting the Initial Code, unless such documentation has already been provided with a prior Initial Code request.

4.1.4 The Code Applicant must have on file or submit a current Number Resource Utilization and Forecast (NRUF) to URCA in accordance with the NRUF Guidelines.

4.1.5 All information provided on the Form N1 (Part 1) will be treated by URCA as confidential, save for the information that must be input to BIRRDS. The information placed in BIRRDS becomes available to the industry upon input of the Form N1 (Part 2) information of the new CO Code.

4.2 Assignment of Additional Code(s) will be made for an established POI or switching entity by satisfying one of the criteria in Sections 4.2.1 to 4.2.2. By completing the Central Office Code Assignment Request Form (Form N1 (Part 1)), the Code Applicant certifies that their existing resources cannot reasonably meet this requirement.

[3] Multiple CO Codes, each associated with a different Exchange Area Rate Center, may be assigned to the same switching entity/POI.

4.2.1 For an Additional Code for Growth, the Code Holder must certify on the Form N1 (Part 1) that existing CO Codes for the switching entity/POI, per service provided by that switching entity or POI, are projected to exhaust within 12 months (i.e., CO Code exhaust) and shall document and provide supporting data by completing Form N3 – Months To Exhaust Certification Worksheet.

4.2.2 When an Additional CO Code for a unique purpose such as when it is necessary for distinct routing, rating or billing purposes (e.g., Calling Party Pays, prepaid), the "Code Applicant" must justify in section 1.7 of Form N1 (Part 1) why an additional CO Code is required and explain why existing resources assigned to that entity cannot satisfy this requirement.

4.3 A CO Code shall only be assigned by URCA to a single Code Holder and shall only be associated with either a single switching entity or POI that is owned or controlled by that Code Holder. In the case where a CO Code is assigned to a POI, the CO Code must be associated with a single switching entity and a single rate center. When a Code Holder's need for telephone numbers in a single switching entity/POI is less than a complete CO Code (i.e., less than 10,000 telephone numbers) and the Affected Parties agree, the Code Holder may use the unused telephone numbers within its assigned CO Code to provide electronic communications services and network routing arrangements for other carriers (i.e., CO Code sharing); however, the Code Holder should ensure that all regulatory, technical, billing, service delivery, and tariff issues are addressed before implementing CO Code sharing.

4.4 It is noted however that in the future URCA may consider establishing procedures to permit the allocation and assignment of TNs to service providers in smaller blocks (for example: blocks of 1,000) out of the traditional CO code NXX range. It is expected that calls would still be routed based on an NXX basis between service providers, but that the terminating carrier may be required to route to a destination within its network based on the NXX-X, the seventh digit (the "G" digit). This new allocation may be considered where there is a need for service providers to be assigned TN resources in areas where the market and the island population would make the assignment of 10,000 TNs an inefficient use of resources. If and when number portability is implemented in The Bahamas, the use of the number portability database to associate a routing number that contains a native NXX of the appropriate termination switch with an NXX-X could be considered to allow for assignment of a "block" of 1000 numbers within an NXX to different service providers could also be considered if the added efficiencies are needed.

4.5 CO Code reservation is only permitted if the Code Applicant can demonstrate the reservation of a CO Code is essential to accommodate technical or planning constraints or pending regulatory approval of a tariff to provide service. Good faith efforts shall be made by the Code Applicant to eliminate or to minimize the number of reserved CO Codes.

4.6 In order to reserve a CO Code, the Code Applicant must submit a Form N1 (Part 1) certifying that a need exists for a CO Code reservation and providing a proposed effective date for CO Code

activation that is within twelve months from the date of the initial application. The Code Applicant must subsequently submit a second Form N1 (Part 1) to apply for the assignment of the reserved CO Code. See Appendix B for timelines.

4.6.1 Upon written request to URCA, one reservation extension of six months may be granted when the proposed effective date for CO Code activation will be missed due to exceptional circumstances beyond the control of the Code Applicant (e.g., hardware, software provision delays, regulatory delays, etc.). See Section 7 "Reclamation Procedures".

4.6.2 No reservation will be made unless the Code Applicant will meet the requirements of CO Code assignment as outlined in Section 4 for Initial Codes or for Additional Codes, dependent upon whether the reserved CO Code is to be an Initial Code or Additional Code.

4.6.3 If a reserved CO Code is not placed In-Service by the Code Applicant within eighteen months of the date of the initial approval by URCA, the CO Code will be released from reservation to the assignment pool.

4.6.4 When a reservation was requested due to technical constraints only, the reservation may be extended beyond the maximum eighteen months period by URCA until the constraint is no longer present, subject to URCA's discretion.

4.6.5 All code reservations will be released when a a Jeopardy NPA Condition is declared. Reservations due to technical constraints may be continued at URCA's discretion.

4.7 A CO Code assignment should not be delayed to a Code Applicant who meets all certification and licensing requirements, if any, when all required tariff filings have been made to provide the service, when approval can be reasonably expected within the established tariff approval time frame, and when the expected tariff approval date will fall on or before the requested effective date for CO Code activation.

4.8 The Industry standard Plant Test Codes are 958 and 959. Upon request, URCA may assign additional CO Codes to Code Applicants or Code Holders for testing purposes (i.e., Plant Test Codes) on a temporary basis for a maximum period of six months. These Plant Test Codes are not to be published in the Telcordia BIRRDS. Code Applicants must submit a completed Plant Test Code Application and Response Confirmation Form (see Form N2). URCA may recover the Plant Test Code within 60 calendar days of notification to the Code Holder at any time during the six-month period. Should the CO Code Holder decide to activate the CO Code, the CO Code Holder must submit a completed Form N1 (Part 1) to URCA requesting a permanent assignment of the CO Code.

5.0 Responsibilities of Utilities Regulation and Competition Authority (URCA)

The CO Code assignment functions of URCA are to:

5.1 Publish on the URCA web site the Guidelines in force from time to time, including all required forms for the use of Code Applicants and Code Holders.

5.2 Receive applications for CO Codes in The Bahamas.

5.3 Consider and determine CO Code requests, is accordance with The Bahamas National Numbering Plan and these Guidelines.

5.4 Respond to the Code Applicant in writing within 14 calendar days from the date of receipt of Form N1 (Part 1) or the Plant Test Code Application Form. URCA's response may seek additional required information, assign a CO Code or Plant Test Code, reserve a CO Code, deny the CO Code or Plant Test Code application, suspend assignment activity with explanation of CO Code or Plant Test Code. Where it denies a CO Code or Plant Test Code application, URCA shall provide specific reasons for the denial to the Code Applicant in writing.

5.5 When the Code Applicant satisfies all the criteria contained in these Guidelines, select the next available unassigned CO Code for assignment.

5.6 Perform URCA's responsibilities for CO Code conservation as specified in Section 8 Central Office Code Conservation.

5.7 Maintain up-to-date records on the status of all geographic CO Codes assignments within each NPA.

5.8 Coordinate and manage The Bahamas NRUF, and provide NRUF consolidated forecast information for Bahamas NPA(s) to the NANPA.

5.9 Concurrent with assignment of a CO Code to a Code Applicant, provide the NPA, NXX, OCN of the code applicant, effective date, switch/POI CLLI and Rate Center (provided by the Code Applicant on the Form N1 (Part 1)) to the Telcordia Routing Administration contact for creation of the Assigned Code Record (ACD) in BIRRDS. The input of the above information into BIRRDS will permit the Code Holder and/or its agent to enter the information contained in Form N1 (Part 2) 1 - 8 into BIRRDS in order to initiate the CO Code activation process (see Code Activation Time Line in Appendix B).

5.10 Analyze and help resolve numbering problems related to CO Code assignments.

5.11 Ensure that the Code Applicant places the CO Code In-Service within the time frame specified in Sections 6.3.3 of these Guidelines. If the assigned CO Code is not placed In-Service within this time frame, URCA shall request the return of the CO Code for reassignment. Upon receipt of the

Form N1 (Part 3) confirming that a CO Code has been placed in service, URCA will inform Telcordia Routing Administration to update the ACD screen to indicate that the code has been activated and provide the effective date of the activation.

5.12 Perform the URCA responsibilities for CO Code reclamation functions as specified in Section 7 Reclamation Procedures.

5.13 URCA may place certain CO Codes in a reserved pool based the NNP Allocation Table or on a request from a Code Applicant. If a Code Applicant requests one of the reserved CO Codes, URCA shall advise the Code Applicant in writing that the CO Code has been reserved and is therefore not available for assignment. Additional appropriate details may be provided and the applicant may be offered another choice. Should the Code Applicant be unwilling to accept any other available CO Code, URCA shall respond to the request in writing notifying "Assignment activity suspended by the Administrator.", providing an explanation noting that the CO Code has been reserved. URCA will not reveal the identity of the party that reserved the CO Code.

5.14 URCA shall prepare information and reports with respect to The Bahamas NPA and CO Codes in accordance with its obligations to the NANPA, that may be made public, taking into account any submissions made by an applicant in support of confidentiality of certain information.

6.0 Responsibilities of Code Applicants and Code Holders

Code Applicants and Code Holders shall ensure that they are familiar with the current version of these Guidelines which shall be available from URCA's web site: www.urcabahamas.bs. Code Applicants and Code Holders shall act in accordance with these Guidelines in respect of all CO Code related activities. Before Industry Notification to activate the CO Code throughout the NANP area can commence, the Code Holder must enter, or arrange to have entered, all required routing and rating data into the BIRRDS database using the Form N1 (Part 2). In order to complete the Form N1 (Part 2), the Code Holder must make the necessary business arrangements including interconnection and billing arrangements, and relevant industry requirements (e.g., RAO, Company Code/OCN and Common Language Location Identifier (CLLI) Codes).

Before a CO Code can be assigned by URCA, Code Applicants must submit a letter to URCA on the entity's official stationary, signed by a corporate officer with appropriate authority, that identifies the Code Applicant's Authorized Representative(s), including name, telephone number, e-mail address and geographic address, for signing and submitting CO Code requests and other documentation described in these Guidelines. Code Applicants are responsible for maintaining their list of Authorized Representatives in an accurate state at all times. This authorization serves as a control measure for the protection of both the Code Applicant and URCA. URCA will only process applications submitted by such Authorized Representatives. URCA will maintain a confidential list of Authorized Representatives for all Code Applicants.

Entities requesting new CO Code assignments as well as entities already assigned CO Codes shall comply with the following:

6.1 The Application Process

6.1.1 Code Applicants for Initial Code or additional CO Code assignments shall submit the application to URCA using Form N1 (Part 1). One form is required per CO Code requested. The Code Applicant must complete all required entries on the Central Office Code Assignment Request Form which must be signed by an Authorised representative. Applicants may email the completed form to the URCA designated address, but a signed paper form must be received prior to processing. For electro-mechanical switches or other special needs, the Code Applicant must perform technical analysis as necessary to determine the appropriate CO Code to be requested. Code Applicants are required to retain a copy of all application forms, appendices and supporting data for five years in the event of an audit.

6.1.2 A Code Applicant is not required to submit the Form N1 (Part 2) to URCA when requesting the assignment of a CO Code. After a CO Code is assigned to the Code Applicant by URCA, the Code Holder must enter, or to arrange to have entered by an AOCN, the information required in the Form N1 (Part 2) into the appropriate routing

and rating databases (i.e., Telcordia BIRRDS) to notify the electronic communications industry of the assignment and related routing and rating information.

6.1.3 Requests for CO Code Assignments shall be made at least 66 calendar days prior to, and not more than 6 months before, the requested "Effective Date".

6.1.4 When requesting Additional Codes, Code Applicants shall meet the requirements as described in Section 4.2 and conform to the conditions contained therein.

6.1.5 The Code Applicant shall certify on the Central Office Code Assignment Request Form that to the best of his/her knowledge necessary governmental/regulatory authorization has been obtained to provide the service(s) for which the CO Code is being requested.

6.2 Information Required for Code Activation

6.2.1 Before a CO Code can become active; all Code Holders are responsible for providing routing and rating information for entry into BIRRDS. In addition, any changes to the requested effective date for CO Code activation and/or Operating Company Number (OCN) need to be provided to URCA as soon as the changes occur and a modification should be created in BIRRDS.

6.2.2 Code Applicants should request the Effective Date of CO Code activation to be at least 66 calendar days after the date of receipt of Form N1 (Part 1) by URCA (see Appendix B Code Activation Time Line). This minimum period is necessary to allow 14 calendar days for CO Code Request Processing by URCA, 7 calendar days for entry of Form N1 (Part 2) data into BIRRDS by the Code Applicant's Administrative Operating Company (AOCN), and 45 calendar days Activation Interval[4] for CO Code activation by the NANP electronic communications industry. Shorter periods will not be acceded to by URCA under any circumstances.

6.2.3 Upon assignment of a CO Code to an Applicant, the Applicant becomes the Code Holder.

6.3 Ongoing Administration

6.3.1 Information Changes

The information associated with a CO Code assignment may change over time. The Code Holder shall ensure that any changes are entered into the BIRRDS, and inform URCA of any changes that affect URCA's assignment records by submitting Form N1 (Part 1), detailing the appropriate changes, for the affected CO Code. This process includes changes such as, but not limited to, the OCN, switching entity/POI and Rate Center name.

[4] For more information, refer to ICCF document 92-0726-004, "Recommended Notification Procedures to Industry for Changes in Access Network Architecture." (www.atis.org)

6.3.2 Responsibilities of the Code Holder

The Code Holder must use all CO Codes assigned to it in a manner consistent with these Guidelines. Code Holders must participate in the audit process necessary to effectively assess CO Code utilization.

6.3.3 Code Use

- CO Code assignments are made subject to the criteria listed in Section 4. A CO Code assigned to a Code Holder by URCA must be placed "In Service" within 6 months after the initially published "Effective Date" of CO Code activation. The Code Holder must certify that the CO Code was placed "In Service" within 6 months after the initially published "Effective Date" by completing and submitting the Code Holder's Confirmation of Code In-Service Date Form (Form N1(Part 3)) to URCA. If it is determined through the audit process or other means that a CO Code is not in use 6 months after the "Effective Date", URCA shall request, in writing, the Code Holder to return the CO Code. Upon receipt of written confirmation from the Code Holder that the CO Code is returned, URCA shall return the CO Code to the available pool for future assignment.

- If a Code Holder no longer has need for a CO Code, the Code Holder should return the CO Code to URCA for reassignment.

- All current and potential Code Holders shall provide forecasted CO Code requirements as input to the NRUF to URCA.

- Code Holders agree to abide by the CO Code reclamation procedures in Section 7.

- Code Holders shall age telephone numbers in the CO Codes assigned to them in accordance with the Aging guidelines specified in Appendix D of these Guidelines.

- Code Holders shall analyze and resolve numbering problems related to misrouted calls and calls that cannot be completed. Such investigations should be initiated by the network operator on whose network the call was originated.

7.0 Return/Reclamation Procedures

7.1 Code Holder Responsibility

7.1.1 The Code Holder shall return the CO Code to URCA if:

- the CO Code is no longer required for the purpose originally assigned;
- the service for which the CO Code was assigned is discontinued;
- the CO Code was assigned, but not used in conformance with these Guidelines; or
- the CO Code was not placed In-Service within the specified time frame.

7.1.2 When returning a CO Code to URCA, the Code Holder shall complete Section 1.5 of the Form N1 (Part 1) to indicate that the CO Code is being returned for future assignment to another network operator. URCA will confirm the return of the CO Code in writing.

7.1.3 It is the responsibility of the network operator returning the CO Code to complete Form N1 (Part 2) and provide it to their AOCN to arrange for the disconnection and removal of any records associated with the CO Code from BIRRDS. The AOCN will also contact Telcordia to arrange for the permanent deletion of the records associated with the disconnected code. Once the BIRRDS records have been removed from the Telcordia databases, the network operator returning the CO Code should contact URCA via E-mail to inform them that the data has been removed.

7.2 URCA Responsibilities

7.2.1 URCA shall contact in writing any Code Holder identified as not having returned to URCA for reassignment any CO Code:

- assigned but no longer in use by the Code Holder;
- assigned to a service that is no longer offered by the Code Holder;
- assigned but not placed In-Service within the time frame specified in these Guidelines; or
- assigned but not used in conformance with these Guidelines.

7.2.2 In circumstances where the Code Holder voluntarily returns a CO Code to URCA, URCA will acknowledge via an e-mail message receipt of the Form N1 (Part 1) from the Code Holder that indicates that a CO Code is being returned. URCA will acknowledge this action in writing indicating return of the CO Code from the former CO Code Holder and will provide the former CO Code Holder with a copy of the notification. In addition, once URCA has been informed that the BIRRDS records associated with the CO Code have been removed from the Telcordia databases, URCA will have Telcordia delete (zap) the ACD screen associated with the CO Code.

7.2.3 If the Code Holder does not provide URCA with a Code Holder's Confirmation of Code In-Service Date form (Form N1 (Part 3)), within 6 months of the Effective Date for activating the code in the PSTN, providing the In-Service date of the CO Code by the Code Holder, URCA shall commence reclamation of the CO Code. In the event that the Code Holder is unable to put the CO Code In-Service within 6 months of the effective date of CO Code activation, the Code Holder may submit a written request to URCA to extend the In-Service date by up to 90 calendar days. This written request must provide evidence that the reason for not putting the CO Code In-Service is not within the control of the Code Holder. URCA shall determine, via review of the Code Holder's written request, whether an extension of up to 90 calendar days is warranted and, accordingly, may extend the In-Service date by up to 90 calendar days.

7.2.4 When URCA initiates code reclamation in any of the above four instances, URCA shall seek written clarification from the Code Holder regarding the use of the resource. If the Code Holder provides an explanation satisfactory to URCA in conformance with these Guidelines, the CO Code will remain assigned and no further action will be taken. If the Code Holder does not provide a written explanation that is satisfactory to URCA, URCA shall initiate action to reclaim the CO Code. URCA shall send a registered letter to the Code Holder's address of record requesting that the Code Holder contact URCA within 30 calendar days of the date of the letter regarding the use of the resource. If the letter is returned as non-delivered, or the Code Holder does not respond within 30 calendar days from the date of the letter, URCA will initiate action to reclaim the CO Code. .

7.2.5 URCA shall receive and investigate all referred allegations of non-use or misuse of CO Code resources and take appropriate action.

7.2.6 URCA shall not make available for assignment any returned CO Code prior to 66 calendar days after receipt of the Form N1 (Part 1) notification and shall update URCA website accordingly.

8.0 Central Office Code Conservation

Central Office Code resources shall be assigned and administered in accordance with the following objectives:

a) To ensure an adequate supply of CO Codes is available at all times to The Bahamas electronic communications industry.
b) To efficiently and effectively administer a limited NANP resource through CO Code conservation.
c) To delay NPA exhaust and the need for NPA relief (e.g., splits/overlays) for as long as reasonably possible.
d) To delay the eventual exhaust of the NANP (see Section 3.2).

8.1 URCA will conduct an NRUF in accordance with the Number Resource Utilization/Forecast Guidelines, to identify network operator's CO Code requirements for the following 5 years. These studies will utilize actual assignment data and projected demand forecasts provided by current and potential Code Holders. All network operator specific actual and forecasted information shall be treated on a proprietary basis.

8.2 Ongoing CO Code administration practices that foster conservation shall include the following: (See Section 7 for CO Code reclamation procedure)

8.2.1 Assignment of CO Codes for temporary testing purposes should be minimized.

8.2.2 Code Protection (See Glossary) arrangements should be avoided unless such arrangements are directed by URCA, or are required to maintain existing dial plan arrangements. URCA shall maintain and make available a record of protected CO Codes and the rationale for such protection.

8.3 When it is determined by URCA that an NPA requires NPA Code Relief, based on NRUF results and projected demand forecasts, URCA will implement NPA Code Relief activities (see the ATIS Industry Numbering Committee (INC) Relief Planning Guidelines).

8.4 When an NPA in The Bahamas is declared by URCA in a Jeopardy NPA Condition, all code reservations will be released, and URCA will assign CO Codes based upon the provisions contained in the ATIS INC Relief Planning Guidelines.

9.0 Maintenance of these Guidelines

9.1 URCA shall review these Guidelines in accordance with the review schedule for The Bahamas National Numbering Plan.

9.2. URCA may also review these Guidelines where necessary to meet changing and unforeseen circumstances.

9.3 Questions regarding these Guidelines or requests for specific changes to these Guidelines should be made to URCA. URCA shall have absolute discretion to accept, reject or defer any request for modification of the Guidelines.

10.0 Glossary

Active Code	A CO Code implemented in the PSTN for specific routing or rating requirements.
Additional CO Code Assignment for Growth	A CO Code assigned to a switching entity or POI subsequent to the assignment of the first CO Code (See Initial Code), for the same purpose as a CO Code that was previously assigned to the same switching entity or POI. An Additional Code for Growth is requested when the line numbers available for assignment in a previously assigned CO Code will not meet expected demand. See section 4.2.1.
Additional CO Code For A Unique Purpose	A CO Code assigned to a switching entity or POI subsequent to the assignment of the first CO Code (See Initial Code), due to a distinct routing, rating, billing or other requirement that is different from the use of any CO Code(s) that were previously assigned to the same switching entity or POI. See sections 4.2.2 and 4.2.3.
Affected Parties	Affected Parties are those entities that have applied for and/or received CO Code assignments or reservations within the NPA per Section 4.0 of these Guidelines (i.e., Code Holders in the NPA).
AOCN	Administrative Operating CompaNy is an organization that has access to input and update data contained in TRA BIRRDS. An AOCN may, under contract to other entities, provide a data input service to BIRRDS. –Inquiries regarding AOCN designation and access to TRA databases should be directed to the TRA at 732-699-6700 or visit their website at www.trainfo.com which includes a list of AOCN companies.
Authorized Representative of Code Applicant	The person from the Code Applicant's organization or its agent that has the legal authority to take action on behalf of that Code Applicant.
BIRRDS (Business Integrated Routing and Rating Database System)	The Telcordia Business Integrated Routing and Rating Database System. The data in BIRRDS supports routing and rating of calls to all CO Codes administered under The Bahamas Central Office Code Assignment Guidelines, as well as all Numbering Plan Areas (NPAs) administered under the North American Numbering Plan (NANP). This System generates the TPM Data Source for billing purposes and the LERG Routing Guide for routing purposes.

Central Office Code, or CO Code	The D-E-F digits of the 10 digit NANP number in a telephone number. Central Office Codes are in the format "NXX", where N is a number from 2 to 9 and X is a number from 0 to 9.
CLLI™	Common Language Location Identifier® ™ is an eleven-character descriptor of a switch or network element (e.g., switch, POI). Each switching entity/POI should have a CLLI in order to be uniformly identified in the industry routing and rating databases. CLLIs are maintained by Telcordia Technologies for more information go to www.commonlanguage.com.
CO Code Exhaust	A point in time at which the quantity of TN's within existing CO Codes which are "Available for Assignment" equals zero within a switching entity/POI or, conversely, when the quantities of "Working Telephone Numbers" plus "TN's Unavailable for Assignment" equal 10,000 times the quantity of existing CO Codes assigned to a switching entity/POI. Where CO Code sharing occurs or partial CO Codes are assigned to a switching entity/POI, the latter number should be adjusted accordingly.
Code Applicant	The entity which has applied for the assignment of a CO Code in accordance with these Guidelines.
Code Holder	The entity to which a CO Code has been assigned in accordance with these Guidelines for use at a Switching Entity or POI it owns or controls.
Code Protection	Code protection is an arrangement whereby a Central Office Code is designated as not available for assignment in an adjacent exchange in an adjacent NPA. This is done to allow 7-digit dialing across the boundary between the adjacent exchanges in the adjacent NPAs.
Conservation	Consideration given to the efficient and effective management of a finite numbering resource in order to minimize the cost and need to expand its availability, while at the same time allowing the maximum flexibility in the introduction of new services, capabilities and features.
Effective Date	The date that a CO Code or supporting data changes (e.g., routing and rating) is/are to become effective within the NANP area PSTN network. The effective date may be: (1) the date the CO Code is to become active (i.e., can first be routed to including for test calls), or

	(2) subsequent dates when pertinent supporting data will be modified (e.g., an active CO Code is associated with a switching entity/POI replacement) or, (3) the date a CO Code will be disconnected (most often CO Codes associated with the "old" NPA side of an NPA "split").
Exchange Area	An Exchange is "The basic unit for the administration and provision of telephone service by a provider, which normally encompasses a city, town or village and adjacent areas. Within an exchange and to other exchanges that have extended area service (EAS) or similar services with that exchange, all subscribers may place an unlimited number of calls of any duration to all other subscribers without incurring long distance toll charges. Exchanges for which EAS or similar services have been established continue, nevertheless to be separate and distinct exchanges."
INC	Industry Numbering Committee. The INC is a standing committee of the the Alliance for Telecommunications Industry Solutions (ATIS). The INC provides an open forum to address and resolve industry-wide issues associated with the planning, administration, allocation, assignment and use of resources and related dialing considerations for public electronic communications within the North American Numbering Plan (NANP) area.
Initial Code	The first geographic Central Office Code assigned to a Code Holder based on identification of a new switching entity, physical POI, or a unique Rate Center Exchange Area or Parish.
In-Service	An active CO Code in which specific subscribers or services are utilizing assigned telephone numbers.
Jeopardy Contingency Plan	A contingency plan for the conservation and assignment of CO Codes that is a part of the NPA Relief Implementation Plan, and would be implemented in the event of a Jeopardy NPA Condition being declared by the PUC.
Jeopardy NPA Condition	A jeopardy condition exists when the forecast and/or actual demand for CO Codes exceeds the quantity of CO Codes available for assignment within the NPA before it is expected that relief can be implemented.
LERG™ Routing Guide	The Telcordia LERG™ Routing: contains information about the local routing data obtained from the Business Integrated Routing and

	Rating Database System (BIRRDS). This information reflects the current network configuration and scheduled network changes for all entities originating or terminating PSTN calls within the NANP area.
Major Vertical Coordinate	A five-digit number used with the Horizontal Coordinates to identify the location of a Rate Center (typically geographic center of) or a switch/POI. The Vertical and Horizontal Coordinates can be used to calculate mileage measurements between two Rate Centers or switches/POIs that are used to determine the appropriate mileage rates in determining the charges for various services. Vertical and Horizontal Coordinates are derived from the latitude, longitude system.
Major Horizontal Coordinate	A five-digit number used with the Vertical Coordinates to pinpoint the location of a Rate Center or a switch/POI. The Vertical and Horizontal Coordinates can be used to calculate mileage measurements between two Rate Centers or switches/POIs that are used to determine the appropriate mileage rates in determining the charges for various services. Vertical and Horizontal Coordinates are derived from the latitude, longitude system.
NANP	The North American Numbering Plan is a numbering architecture in which every station in the NANP Area is identified by a unique ten-digit address consisting of a three-digit NPA Code, a three digit Central Office Code of the form NXX, and a four-digit line number of the form XXXX. The NANP Administration (NANP-A) is responsible for administration of the North American Numbering Plan and associated addressing resources.
National Exchange Carriers Association (NECA)	The NECA assigns Company Codes that are used as Operating Company Numbers (OCNs) in the Telcordia routing and rating databases. Companies with no OCN assignment may contact NECA at 973 884-8355 to obtain a Company Code. The NECA web site is www.neca.org The web page to obtain information on Company Codes is: www.neca.org/comcode.htm
National Numbering Plan Administrator (NNA)	The entity responsible for the administration of Bahamas numbering resources including CO Codes within Bahamas geographic NPA.
NPA	Numbering Plan Area (also called Area Code). An NPA is the 3-digit code that occupies the A, B, and C positions in the 10-digit NANP format that applies throughout the NANP serving area. NPAs are of

	the format NXX, where N represents the digits 2-9 and X represents any digit 0-9. In the NANP, NPAs are classified as either geographic or non-geographic. a) Geographic NPAs are NPAs that correspond to discrete geographic areas within the NANP serving area. b) Non-geographic NPAs are NPAs that do not correspond to discrete geographic areas, but which are instead assigned for services with attributes, functions, or requirements that transcend specific geographic boundaries. The common examples are NPAs in the N00 format, e.g., 800, 900.
NPA Exhaust	A point in time at which the quantity of CO Codes within the NPA which are available for assignment equals zero.
NPA Relief	NPA Relief refers to an activity that must be performed when an NPA nears exhaust of its CO Code capacity.
Number Resource Utilization/Forecast (NRUF)	The Number Resource Utilization/Forecast (NRUF) is an annually required report from CO Code Holders/Applicants that provides each providers TN utilization data and forecasted CO Code demand.
Operating Company Number (OCN)	An Operating Company Number (OCN) is a code used to uniquely identify and associate a company with certain records in Telcordia's databases and in related output products (e.g. LERG, V&H coordinates data). Specific to these Guidelines, the OCN is intended to uniquely identify the Code Holder. OCNs are used in various electronic communications industry processes primarily as a means to identify local service providers. Telcordia lists Operating Companies in various "categories" (see the Telcordia Traffic Routing Administration internet site at www.trainfo.com) that are assigned by NECA. Companies that do not have an OCN may contact the National Exchange Carriers Association (NECA) to request the assignment of a NECA Company Code(s) that can be used as the basis for numeric OCNs in the Telcordia databases see the NECA entry for contact information.
Plant Test Codes	There are two standard Plant Test Codes (i.e., 958 and 959) that may be used by any entity for testing within its network. In addition, CO Codes may be assigned by the PUC on a temporary basis to Code

	Applicants or Code Holders. See Section 4.6.
Point of Interconnection (POI)	The physical location where two carriers' facilities interconnect for the purpose of interchanging traffic on the PSTN.
Protected Code	See Code Protection.
PSTN	Public Switched Telephone Network. The PSTN is composed of all transmission and switching facilities and signal processors supplied and operated by all electronic communications operators for use by the public. Every station on the PSTN is capable of being accessed from every other station on the PSTN via the use of NANP numbers.
RAO Code	See Revenue Accounting Office Code.
Rate Center	A specific geographic point used for determining distance dependent rates for PSTN calls.
Reassignment	Refers to the transfer of a working or assigned CO Code from one switching entity/POI to another.
Reserved CO Codes	A CO Code that has been identified and set aside by the PUC for some specific use or purpose, such as for a Code Applicant.
Revenue Accounting Office (RAO) Code	Revenue Accounting Office (RAO) Codes are a component in the Central Office Code Assignment process. The RAO Code Guidelines, prepared by the RAO Administrator (Telcordia Technologies, Inc.), includes background information on RAOs and describes the means of requesting an RAO assignment (see the Telcordia Routing Administration internet site at www.trainfo.com).
Switching Entity	A network element system used to connect lines to lines, lines to trunks, or trunks to trunks for the purpose of originating/terminating PSTN calls. A single switching system entity may be assigned several CO Codes.
Telcordia Technologies Inc.	Telcordia Technologies Inc. provides various services to the North American electronic communications industry, including but not limited to Traffic Routing Administration (TRA). The TRA operates routing, rating, and other databases that are used by the electronic communications industry. Additional information may be obtained from TRA at 732-699-6700 or at web site: www.trainfo.com
Electronic Communications	Any entity that is authorized, as appropriate, by the appropriate

Service Providers	regulatory authority to provide electronic communications services to the public.
TPM™ Data Source	The Telcordia TPM™ Data Source contains all the active NPA and NXX-X combinations in the NANP and for each of these points the following data is provided: Major Vertical and Horizontal coordinates, Rate Area, Local Access Transport Area (LATA)/LATA-like code, LATA subzone code, RAO code, place and state, province or country name abbreviation, and time zone indicator to allow for appropriate calculation of intercompany billing.
TN's (Telephone Numbers) Available for Assignment	The quantity of telephone numbers within existing CO Codes which are immediately available for assignment to subscriber access lines or their equivalents within a switching entity/POI.
TN's (Telephone Numbers) Unavailable for Assignment	The quantity of telephone numbers within existing CO Codes which are not immediately available for assignment to subscriber access lines or their equivalents within a switching entity/POI. Examples include numbers required for maintenance testing, numbers reserved for specific customers or specific services, disconnected numbers on intercept, pending connects or disconnects.
Telcordia Routing Administration (TRA)	Traffic Routing Administration operated by Telcordia Technologies Inc.
Working Telephone Numbers (WTNs)	The quantity of telephone numbers within existing CO Codes which are assigned to working subscriber access lines or their equivalents, e.g., direct inward dialing trunks, paging numbers, special services, temporary local directory numbers (TLDNs), etc., within a switching entity/POI.

11.0 Appendices and Forms

Appendix A. Audit

Appendix B. Time Lines

Appendix C. Number Resource Utilization/Forecast Guidelines

Appendix D. Aging and Administration of Disconnected Telephone Numbers

Form N1 (Part 1) – Central Office Code Assignment Request Form

Form N1 (Part 2) – Routing and Rating Information Forms

Form N1 (Part 3) – Code Holder's Confirmation of Code In-Service Date Form

Form N2 – Plant Test Code Application Form

Form N3 – Months to Exhaust Certification Worksheet

Appendix A – Numbering Resources Audit

URCA may, pursuant to Condition 5 of the Individual Operating Licence (IOL), and section 8 of the Communications Act 2009 (Comms Act), audit the performance by an electronic communications network operator of its obligations under the IOL and the Comms Act. URCA may, in exercise of this power, audit the management and use of numbering resources by a code applicant, code holder as well as any licensed reseller of services using numbering resources.

URCA, or its appointee at its direction, may conduct audits on a random basis, or where URCA detects behavior which may be in breach of the licensee's obligations.

The purpose of a numbering audit is to ensure, *inter alia*:

- compliance with the obligations and requirements contained within the licence, the Comms Act and these industry guidelines;
- the efficient and effective use of NANP numbering resources by licensees; and,
- that licensees abide by their licence conditions and industry guidelines, on an ongoing basis.

The Audit Program is outlined below. URCA may implement all or only a portion of the program on any selected audit.

Line No.	Audit Program Workstep
1	General
1.1	The terms "document" and "note" indicate that the information shall be made part of the work papers. These terms also indicate that the findings shall be noted in the report except for internal control procedures.
1.2	The practitioner (i.e., the independent auditor) will coordinate with the user of the audit report (i.e. URCA) to schedule a date, time and location for reviewing the work papers.
1.3	Send "Data Request" to the audited network operator to obtain information before performing the audit procedures. *See Below*.
2	Internal Controls Testing
2.1	Identify and document the significant manual and/or system applications that the company uses to comply with the URCA rules and guidelines regarding numbering.
2.2	Document the flow of transactions and the controls involved in handling numbering resources. This would include, but not be limited to, reserved, aging, available for assignment and assigned numbers, filling out and filing the NRUF form, as well as requests to URCA for initial and growth numbering resources.
2.3	Document the policies, practices and procedures in place to ensure that rules enacted by URCA or new guidelines regarding numbering resource optimization are implemented in a timely manner.
2.4	Complete the "Internal Control Questionnaire" and place it in the work papers. *See* Attachment 2.

3	COMPLIANCE TESTING
3.1	Assigned Numbers
3.1.1	Numbers working in the Public Switched Telephone Network (PSTN) under an agreement such as a contract or tariff.
3.1.2	URCA will provide a sample from the company's assigned numbers reported on the most recent NRUF.
3.1.3	Trace the sample to the billing records to ensure that the numbers are assigned and working in the PSTN. Note any exceptions and the company's response to the exceptions.
3.2	Aging Numbers
3.2.1	Disconnected numbers that are not available for assignment to another end user customer for a specified period of time. Numbers previously assigned to residential customers may be aged for no more than 90 days and business numbers no longer than 360 days.
3.2.2	Determine and document how the company ages numbers, both residential and business.
3.2.3	Obtain a sample of aging numbers and note if numbers have been held for more than 90 days for residential numbers and more than 360 days for business numbers. Note exceptions and the company's response to the exceptions.
3.2.4	Determine and document the company's processes and procedures for handling numbers suspended for non-payment.
3.2.5	Obtain a sample of suspended numbers and document if numbers have been handled according to the company's processes and procedures. Note exceptions and the company's response to the exceptions.
3.2.6	Determine and document the company's processes and procedures for handling "permanently disconnected" numbers.
3.2.7	Obtain a sample of "permanently disconnected" numbers and document if numbers have been handled according to the company's processes and procedures. Note exceptions and the company's response to the exceptions.
3.3	Reserved Numbers
3.3.1	Numbers that are held by service providers at the request of specific end users or customers for their future use. Numbers held for specific end users or customers for more than 180 days shall not be classified as reserved numbers.
3.3.2	Obtain and document processes and procedures that sales representatives use to reserve numbers.
3.3.3	Determine through inquiry and document if sales representatives can reserve numbers without having a pending order.
3.3.4	Obtain and document the company's processes and procedures for tracking and inventorying reserved numbers.
3.3.5	Obtain and document the company's processes and procedures for reserving numbers for Centrex customers.
3.3.6	Obtain a sample of Centrex numbers (including PBX numbers) and trace to billing to ensure that the numbers are assigned and working. Note any exceptions and the company's response to the exceptions.
3.3.7	Obtain a sample of reserved numbers and document whether there is a contract indicating a specific end-user(s) and if the reserved numbers had been held for less than 180 days. Note any exceptions and the company's response to the exceptions.
4	Number Not Available for Assignment

4.1	Numbers used by telecommunications carriers to perform internal administrative or operational functions necessary to maintain reasonable quality of service standards.
4.2	Obtain and document the company's processes and procedures for assigning such numbers.
4.3	Obtain a sample of administrative numbers and trace the numbers to determine the function/use of the numbers. Note any exceptions and the company's response to the exceptions.
4.4	Obtain and document process and procedures the company has for turning unused numbers into available numbers.
4.5	Application for Numbering Resources (Initial)
4.5.1	Obtain from URCA the last two initial numbering applications that the company has filed with URCA.
4.5.2	Obtain and document that the applicant is authorized to provide service for which the numbering resources are requested. Examples of authorizing evidence are stated commission orders or certificates to operate as a carrier.
4.5.3	Determine and document that the applicant is or will be capable of providing service within 60 days of the numbering resource activation date. This pertains to applicants requesting an initial NXX code as well as those requesting an initial thousands-block
4.5.4	Obtain the last two initial numbering applications from the company and document that the applicant has met the requirements outlined in the Central Office Code Assignment guidelines.
4.5.5	Check the above documentation against the information received from NANPA. Note any discrepancies and inquire of the company for explanation(s). Note the exception(s) and the company's response(s).
4.6	Application for Numbering Resources (Growth)
4.6.1	Obtain from URCA the last two growth numbering applications that the company has filed with URCA.
4.6.2	Determine and document from the above applications that the company completed a Month-to-Exhaust (MTE) worksheet. The worksheet must contain the following; the utilization by rate center for the preceding six months; the projected monthly utilization for the next twelve months; and the current number resource utilization rate level for the rate center in which the company is seeking growth-numbering. Note any exceptions and the company's response to the exceptions.
4.6.4	Document the process the company uses to fill out the worksheet. Test the calculations to determine whether the process is accurate. Note any exceptions and the company's response to the exceptions.
4.6.5	Compare the utilization rate reported in the MTE for the rate reported in the latest NRUF. Note any exceptions. Inquire of the company for explanations.
4.6.6	Check the company's applications to the information received from the NANPA. Note any exceptions. Inquire of the company for explanations for any discrepancies.
5	Reclamation of Numbering Resources
5.1	Obtain and document the processes and procedures for reclaiming numbers.
5.2	Determine and document the amount of numbers the company has reclaimed in the last six-month period.
6	NRUF
6.1	Determine and document the company's processes and procedures for filling out, completing and filing the NRUF.
6.2	Determine and document where the information for the NRUF is derived from and how it is input into the system. Also document the processes used for pulling the information from the system(s).
6.3	Determine and document the controls that ensure the accuracy of the information and the NRUF.

7	Report Structure
7.1	The audior's report shall present all procedures and shall disclose all results encountered for each procedure performed, regardless of materiality. The user's expectation is that the practitioner will include in its report all results of those procedural steps unless an exception is noted in the audit program.
7.2	The practitioner shall prepare a draft report that will be available for review by the user and the company, no later than 30 days after the completion of fieldwork.
7.3	The user will provide written comments to the practitioner no later than 10 business days after receiving the draft report.
7.4	The company may submit comments to the practitioner within 10 business days after receiving the draft report. Any comments received will be attached to the report
7.5	The practitioner will submit an updated draft report with any changes required by the user to the user 5 business days after receiving the user's and the company's comments. A final report will be provided 5 business days after that report.

Attachment 1: Standard Data Request[1]

[Addressed to audited licensee]
Please provide the following information by (date):

a. What individual or group has responsibility for requesting numbers? Where is the individual or group located?

b. Who is responsible for keeping company personnel updated on changes to the URCA's numbering rules?

c. What individual or group has responsibility for filling out and filing NRUF with the URCA? Where is the individual or group located?

d. Where are the pertinent number related documents and records maintained?

e. Where are the billing records maintained?

f. Describe the company's processes and procedures for *aging numbers.* What individual or group has responsibility for *aging numbers* and where is the individual or group located?

g. Describe how aging numbers are returned to service. What individual or group has responsibility for returning these numbers to service, and where is the individual or group located?

h. Describe the company's processes and procedures for handling numbers suspended for non-payment. What individual or group has responsibility for handling this process, and where is the individual or group located?

i. Describe the company's processes and procedures for handling "permanently disconnected" numbers. What individual or group has responsibility for handling this process, and where is the individual or group located?

j. Describe the company's processes and procedures for reserving numbers. What individual or group has responsibility for handling this process, and where is the individual or group located?

k. Describe the company's processes and procedures for handling *numbers unavailable for assignment.* What individual or group has responsibility for *numbers unavailable for assignment* and where is the individual or group located?

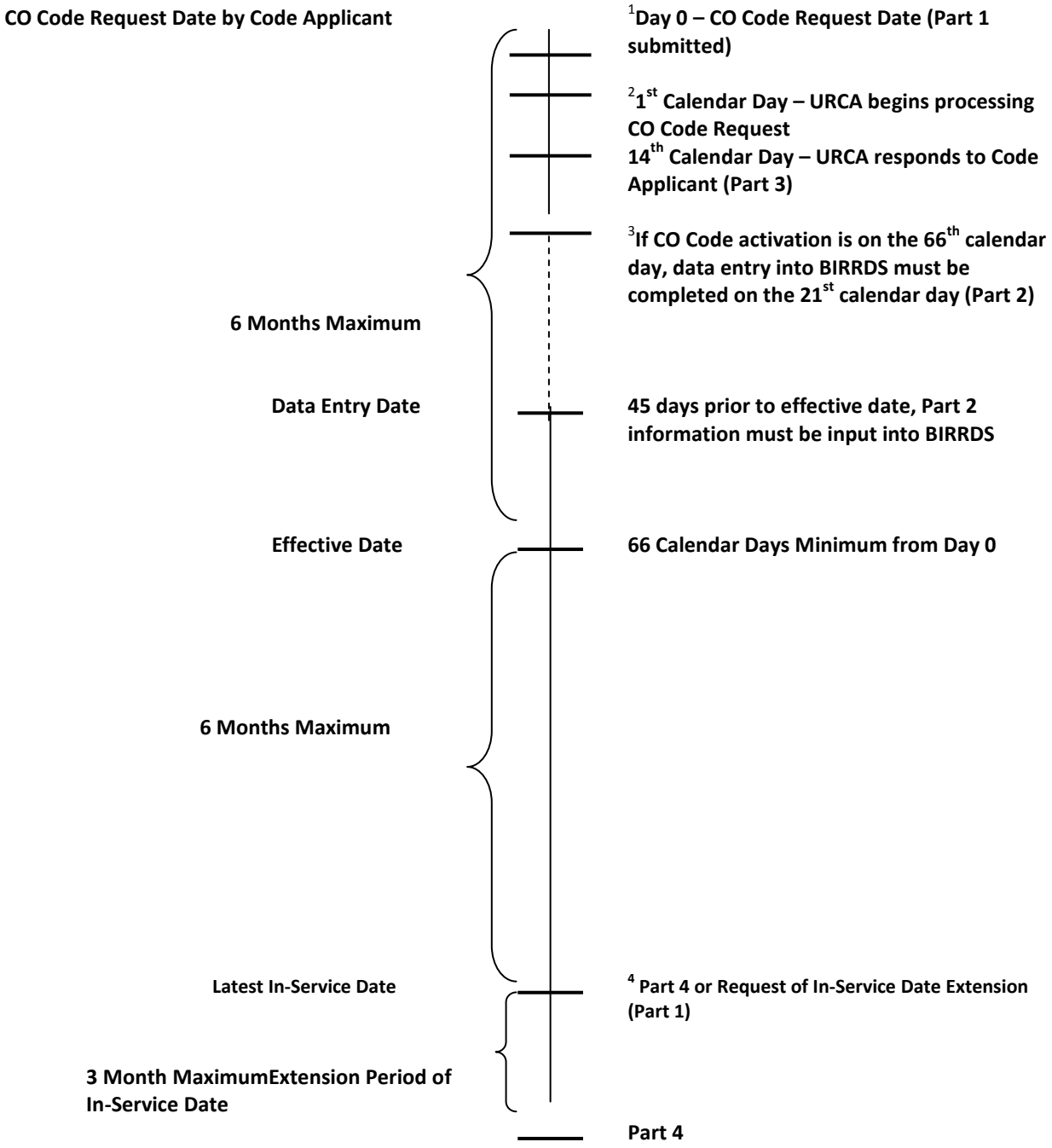
l. Describe the company's processes and procedures for reclaiming numbers. What individual or group has responsibility for handling this process, and where is the individual or group located?

m. Describe the company's processes and procedures for assigning all numbers in an opened thousands-block. What individual or group has responsibility for handling this process, and where is the individual or group located?

[1] *See* Numbering Audit Program at Line No. 1.3

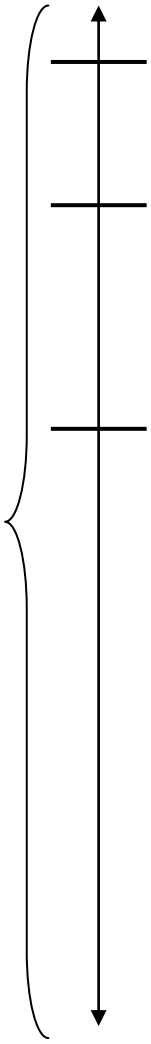
Appendix B - Time Lines

I: Code Activation Time Line (Initial & Additional)



[1] Day 0 may be as early as 6 months prior to the Effective Date, but *no later* than 66 calendar days prior to the Effective Date.
[2] 1st and 14th calendar day intervals commence from Day 0.
[3] This interval may be affected by the occurrence of statutory holidays in Bahamas or the U.S.
[4] In-Service Date could be up to 6 months after the Effective Date.

II. Code Reservation Time Line



Day 0 – Request for COCode Reservation by Code Applicant

1st Calendar Day – URCA begins processing CO Code Request

14th Calendar Day – URCA responds to Code Applicant

12 Months (Maximum Reservation Interval)

12th Month – Code Applicant must either submit a Code Application Request (Part 1), request a reservation extension (Part 1) or cancel the reservation

6 Months Maximum Extension Period (exceptional circumstance – refer to Section 4.4.1)

Reservation Extension Period

18th Month[5] – Code must be placed in service or returned to URCA

[5] This eighteen month period includes the minimum industry interval for Code activation of 66 days or more established in accordance with section 6.2.2 and any extension of 90 or less days granted in accordance with section 7.2.2.

Appendix C – Numbering Resource Utilization/Forecast Reporting (NRUF) Guidelines

1.0 Purpose And Scope

This document specifies guidelines and procedures that address URCA's Numbering Resource Utilization/Forecast (NRUF) Report. Network Operators are required to submit an NRUF Report to provide both utilization and forecast data for numbering resources from national numbering plan on a yearly basis.

This information is used by URCA to project the exhaust date of The Bahamas NPA(s) as well as for input to the North American Numbering Plan Administrator (NANPA) to forecast the life span of the North American Numbering Plan (NANP).

The NRUF Report addresses the need to collect both utilization and forecast- data in a single tool. Along with forecasting NPA and NANP exhaust, the NRUF Report also assists in assessing the utilization of numbering resources within an NPA code for the potential application of numbering resource optimization measures. This data provides valuable insight to the impact of various numbering resource optimization measures that may be implemented to extend the life of a NPA code. In addition, utilization data collected via the NRUF Report may also serve in the audit process of an individual service provider's usage of numbering resources.

The INC NRUF guidelines apply throughout the NANP area subject to the appropriate regulatory and governmental procedures and constraints within each NANP country. This document represents The Bahamas version of the NRUF Guidelines.

2.0 NRUF Report Overview

The NRUF Report combines both utilization and forecast data to more accurately project the exhaust of numbering resources.

NRUF requires network operators to provide utilization and forecast data as follows:

1) Operators shall submit to URCA the NRUF data on or before February 1, for the year ending on December 31.

2) Operators shall report forecast data at the NXX level per rate center.

Service provider submission of the NRUF Report is mandatory so that more complete information can be gathered which will contribute to improved forecasts of NPA code exhaust. In addition, due to the large amount of utilization and forecast data to be collected, electronic data collection and storage is recommended to improve efficiencies and to enhance data analysis and reporting capabilities. The preferred electronic data collection method is the submission of electronic spreadsheet.

3.0 Assumptions And Constraints

The following are the assumptions and constraints for the NRUF Report:

A reporting carrier is responsible for providing timely and accurate utilization and forecast data for numbering resources to URCA. The sanction for noncompliance will be the withholding by URCA of numbering resources as described in the CO Code (NXX) Assignment Guidelines.

3.1 URCA shall secure all data received and treat network operator specific forecast and utilization data as confidential. Specifically, disaggregated, carrier-specific forecast and utilization data should be treated as confidential and should be exempt from public disclosure.

3.2 Reporting carriers shall report their utilization and forecast data by separate legal entity. Each reporting carrier shall be identified by its Operating Company Number (OCN) on the submission. The reporting carrier must populate the SP Name field of the NRUF with the exact name that corresponds to the SP OCN, as indicated in NECA records as also published in the LERG™ Routing Guide Volume 1.

4.0 NRUF REPORT ATTRIBUTES

The NRUF Report requires the submission of both utilization and forecast data.

4.1 Utilization Data

Operators shall submit utilization data on an annual basis. Network Operators shall report utilization data at the central office code (NXX) level per rate center. All utilization data shall be reported as Telephone Numbers (TNs) categorized in one of the following mutually exclusive categories: *assigned, reserved, aging, and other unavailable*. These categories are defined in the Glossary.

4.2 Forecast Data

All SPs shall submit forecast data on an annual basis. The forecast period is five (5) years for the February 1 submission. Network Operators shall submit forecast data at an NXX level per rate center. Forecasts shall specifically identify the number of initial and growth codes required.

4.3 Data Submission Methods

The methods for SPs to submit NRUF Reports is via an electronic spreadsheet via e-mail to URCA or CD.

4.4 Data Analysis

URCA uses both the utilization and forecast data provided by operators to develop exhaust projections for The Bahamas NPA(s). URCA is required to provide these projections to the North American Numbering Plan Administrator.

5.0 URCA RESPONSIBILITIES

5.1 URCA is the single point of contact for collection of forecast and utilization data for The Bahamas.

5.2 NRUF submission reminders shall be sent out to operators so that data can be received by URCA by February 1 of each year. The NRUF submission reminders should be sent out at least two months prior to the submission dates.

5.3 URCA will process all the data obtained from the semi-annual submissions within sixty days of the submission date.

5.4 URCA will send to NANPA the annual exhaust projections of The Bahamas NPA(s). URCA shall be available to answer questions pertaining to any aspect of the NRUF Report process, forms, instructions, data assumptions, etc.

5.5 URCA compiles, examines, and analyzes the forecast and utilization data submitted by reporting operators to carry out its NNP management responsibilities. URCA shall project NPA exhaust dates for all Bahamas NPAs using data collected annually.

5.6 URCA shall use its assignment record data and LERG to examine each operators NRUF utilization data to ensure that utilization is reported for all allocated codes (NXXs) associated with the SP's OCN.

5.7 If an NRUF Report is not received from a given operator, URCA has authority to deny future numbering requests from that delinquent operator until a current NRUF Report has been submitted.

5.8 If URCA identifies any significant inconsistencies or anomalies in an SP's data, URCA will inform the submitting operator of its findings, after which the operator shall have five days to explain the inconsistencies or anomalies, or to resubmit the data. URCA shall assign no additional resources to that SP until the all questions regarding the inconsistency or anomaly have been resolved.

6.0 Service Provider Responsibilities

6.1 Each carrier shall submit to URCA forecast and utilization data on or before February 1, for the period ending on December 31.

6.2 All service providers must report their number usage in the following mutually exclusive categories: aging, reserved, assigned and other unavailable. Operators must describe the use of Other Unavailable numbers in the "Notes" field of the utilization report for the NXX.

6.3 Network operators shall submit or have submitted NRUF forecast and utilization data to URCA for the NPA(s) in which a CO code(s) is being requested. This requirement shall not apply in instances where an NPA has been opened since the last NRUF Report and the operator has submitted NRUF data for the NPA(s) previously serving the geographic areas involved.

6.4 Regardless of a code/block effective date, operators shall report utilization information on all assigned CO Code resources as of December 31 for the February 1 submission operators should also use the URCA approval date of code/block transfer or OCN change, not the effective date, to determine under which OCN utilization is to be reported. SPs are not responsible for reporting utilization on resources that have been returned to URCA as long as the SP is in receipt of the URCA approval by December 31 for the February 1 submission. If the SP's request was suspended on the URCA approval, the SP is not expected to report utilization. Utilization calculated using NRUF data is distinct from that reported on Months To Exhaust worksheets submitted to URCA to qualify for blocks.

6.5 Operators shall be prepared to respond to any questions that URCA may have with respect to their NRUF data and be prepared to modify their submitted data if necessary.

6.6 If URCA identifies any significant inconsistencies or anomalies in an operator's data, URCA shall inform the submitting operator of its findings, after which the operator shall have five business

days to explain the inconsistencies or anomalies, or to resubmit the data. If, after the discussions with an operator, URCA concludes that the SP's data are insufficient, then URCA may withhold numbering resources from that operator until there is a resolution to URCA's satisfaction.

6.7 Operators are responsible for keeping company contact information updated with URCA.

6.7 In a rate center consolidation an operator must update its NRUF forecast in the new rate center(s) in order to receive resources in that rate center. Forecasts in the old rate center(s) will be deleted on the effective date of the consolidation. In the case of a rate center consolidation with a consolidation effective date that falls between December 31 and February 1, SPs should submit their NRUF forecasts for the rate center that is in effect at the time of the SP's NRUF submissions to avoid submission errors.

7.0 GLOSSARY

Activation Deadline	The activation deadline is six months after the effective date in the Telcordia™ LERG™ Routing Guide. Numbering resources must be placed in service within six months of the effective date in the LERG Routing Guide to avoid reclamation. ((Telcordia and LERG Routing Guide are trademarks of Telcordia Technologies, Inc.)
Active Code	A code assigned by the CO Code Administrator and implemented in the PSTN for specific routing and rating requirements as of the LERG Routing Guide effective date.
Additional NXX Code Assignment for Growth	A code assigned to a switching entity or point of interconnection subsequent to the assignment of the first code (See Initial Code), for the same purpose as a code that was previously assigned in that rate center. A "Growth Code" is requested when the line numbers available for assignment in a previously assigned NXX code(s) will not meet expected demand.
Aging Numbers	Aging numbers are disconnected numbers that are not available for assignment to another end user or customer for a specified period of time. Numbers previously assigned to residential customers may be aged for no more than 90 calendar days. Numbers previously assigned to business customers may be aged for no more than 365 calendar days (FCC 00-104 §52.15 (f)(1) (ii)) and Erratum in CC Docket 99-200, released July 11, 2000.).
Assigned Numbers	Assigned numbers are numbers working in the PSTN under an agreement such as a contract or tariff at the request of specific end users or customers for their use, or numbers not yet working but having a customer service order pending. Numbers that are not yet working and have a service order pending for more than five calendar days shall not be classified as assigned numbers.

Audit	The accumulation and evaluation of evidence about documented information of an auditee to determine and report on the degree of compliance with the guidelines and NNP.
Auditee	The operator that is the subject of an audit.
Auditor	URCA or its other designated agents
Available Numbers	Available numbers are numbers that are available for assignment to subscriber access lines, or their equivalents, within a switching entity or point of interconnection and are not classified as assigned, intermediate, administrative, aging, or reserved. Available numbers is a residual category that can be calculated by subtracting a sum of numbers in the assigned, reserved, intermediate, aged, and administrative primary categories from the total of numbers in the inventory of a code.
BIRRDS	The Telcordia™ Business Integrated Routing and Rating Database System contains data in the routing and rating of calls. Contains a complete description of all Local Exchange Companies' networks in the NANP area and pertinent information relating to the networks of other code holders. This provides information for, (1) message routing, (2) common channel signaling call setup routing, and (3) operator service access routing. Data supports all CO Codes assigned through these Guidelines, as well as all CO Codes in place prior to the existence of these Guidelines, and covers all Numbering Plan Areas (NPAs) administered under the North American Numbering Plan (NANP).
Central Office (CO) Code	The sub-NPA code in a TN, i.e., digits D-E-F of a 10-digit NANP area address. Central office codes are in the form "NXX," where N is a number from 2 to 9 and X is a number from 0 to 9. Central office codes may also be referred to as "NXX codes." (47 C.F.R. § 52.7(c))
CLLI™	A CLLI *Location Identification Code* is an eleven-character alphanumeric descriptor used to identify switches, points of interconnection, and other categories of telephony network elements and their locations. Companies that are licensees of COMMON LANGUAGE® Products can refer questions to their company's COMMON LANGUAGE Coordinator. If you do not know if you are a licensee, do not know your Coordinator, or are a licensee with questions regarding CLLIs, call the COMMON LANGUAGE Hotline, 877-699-5577. Alternatively, or if you are *not* a licensee, you may obtain further information at www.commonlanguage.com. (COMMON LANGUAGE is a

	registered trademark and CLLI is a trademark of Telcordia Technologies, Inc.)
CO Code Administrator	Entity(ies) responsible for the administration of the NXXs within an NPA. In the Bahamas this is URCA.
Conservation	Consideration given to the efficient and effective use of a finite numbering resource in order to minimize the cost and need to expand its availability in the introduction of new services, capabilities and features.
Exchange or Exchange Area	A geographic area tariffed by a state utilities commission and served by an incumbent Local Exchange Carrier (LEC). A LEC's franchise territory is comprised of multiple Exchanges and the Basic Local Calling Areas are defined by Exchanges. The Exchanges are generally in the state General Subscriber Services Tariff, Section A3. The term "Exchange" denotes a geographic area generally smaller than a Local Access Transport Area (LATA) and usually embraces a city, town or village and its environs. Subscribers in a given Exchange area may be served by one or more central offices together with the associated facilities or subscribers in an Exchange area may be served by a central office located in an adjacent Exchange area. (A LATA is usually comprised of multiple Exchanges.)
Initial Code	The first geographic NXX code assigned to a Service Provider for each rate center in which it provides service.
Inventory	The term "inventory" refers to all telephone numbers distributed, assigned or allocated:to a service provider
NANP (North American Numbering Plan)	A numbering architecture in which every station in the NANP area is identified by a unique ten-digit address consisting of a three-digit NPA code, a three digit central office code of the form NXX, and a four-digit line number of the form XXXX, where N represents the digits 2-9 and X represents the digits 0-9. It is the basic numbering scheme for the telecommunications networks located in American Samoa, Anguilla, Antigua, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent, Turks & Caicos Islands, Trinidad & Tobago, and the United States (including Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands) [47 CFR 52.5 (c)].

NANPA (North American Numbering Plan Administration)	The NANPA is responsible for the neutral administration of NANP numbering resources, subject to directives from regulatory authorities in the NANP member countries. The NANPA is an impartial non-governmental entity that is not aligned with any particular telecommunications industry segment.1 Under contract to the FCC, NANPA's responsibilities include assignment of NANP resources, and, in the U.S. and its territories, coordination of area code relief planning and collection of utilization and forecast data. See also 47 CFR 52.13.
NPA	Numbering Plan Area (NPA), also called area code. An NPA is the 3-digit code that occupies the A, B, and C positions in the 10-digit North American Numbering Plan (NANP) format that applies throughout the NANP area. NPAs are of the form NXX, where N represents the digits 2-9 and X represents any digit 0-9. In the NANP, NPAs are classified as either geographic or non-geographic. A) Geographic NPAs are NPAs which correspond to discrete geographic areas within the NANP area. B) Non-geographic NPAs are NPAs that do not correspond to discrete geographic areas, but which are instead assigned for services with attributes, functionalities, or requirements that transcend specific geographic boundaries. The common examples are NPAs in the N00 format, e.g., 800.
OCN (Operating Company Number)	An Operating Company Number (OCN) is a four place alphanumeric code that uniquely identifies providers of local telecommunications service. OCN assignments are required of all SPs in their submission of utilization and forecast data (FCC 00-104, ¶ 41 and Public Notice DA 00-1549). Relative to CO Code assignments, NECA assigned Company Codes may be used as OCNs. Companies with no prior CO Code or Company Code assignments contact NECA (www.neca.org; 800-228-8597) to be assigned a Company Code(s). Since multiple OCNs and/or Company Codes may be associated with a given company, companies with prior assignments should direct questions regarding appropriate OCN usage to the Telcordia™ Routing Administration (TRA) (www.trainfo.com; 866-672-6997).
Other Unavailable Numbers	Other Unavailable numbers are administrative numbers used by

[1] Administration of the North American Numbering Plan, Report and Order, CC Docket No. 92-237, 11 FCC Rcd 2588, 2608 (1995) (NANP Order).

	telecommunications carriers to perform internal administrative or operational functions necessary to maintain reasonable quality of service standards. Examples of administrative numbers are: Test numbers, employee/official numbers, and , Temporary Local Directory Numbers. Operators must describe the use of Other Unavailable numbers in the "Notes" field of the utilization report for the NXX.
Pooling Administrator (PA)	The term Pooling Administrator refers to the entity or entities responsible for administering a thousands-block number pool (FCC 00-104 §52.7 (g)). The Pooling Administrator is responsible for the neutral administration of thousands-blocks from Central Office (CO) Codes in areas where thousands-block number pooling has been ordered or implemented. The PA is an impartial non-governmental entity that is not aligned with any particular telecommunications industry segment and is under contract to the FCC.
Public Switched Telephone Network (PSTN)	The PSTN is composed of all transmission and switching facilities and signal processors supplied and operated by all telecommunications common carriers for use by the public. Every station on the PSTN is capable of being accessed from every other station on the PSTN via the use of NANP E.164 numbers.
Rate Area	Denotes the smallest geographic area used to distinguish rate boundaries.
Rate Center	Rate Center is used for numbering resource applications and reports to associate telephone numbers with a geographic area, as defined by the relevant regulatory agency. A Rate Center is also a uniquely defined point (Vertical & Horizontal Coordinates) located within an exchange area from which mileage measurements are determined. These measurements can be used with the tariffs in the message rating processes.
Reporting Carrier	Refers to a telecommunications operator that receives numbering resources from URCA.
Reserved Numbers	Reserved numbers are numbers that are held by service providers at the request of specific end users or customers for their future use. Numbers held for specific end users or customers for more than 180 calendar days shall not be classified as reserved numbers (FCC 00-429 §52.15 (f)(1) (vi)).
Switching Entity	An electromechanical, electronic, or digital system for connecting lines to lines, lines to trunks, or trunks to trunks for

	the purpose of originating/terminating PSTN calls. A single switching system may handle several Central Office (CO) codes.
Temporary Local Directory Number (TLDN)	A number dynamically assigned on a per call basis by the serving wireless service provider to a roaming subscriber for the purpose of incoming call setup. See “Administrative Numbers” definition.
Test Number	A TN assigned for inter- and intra-network testing purposes. See “Administrative Numbers” definition.

Appendix D – Aging and Administration of Disconnected Telephone Numbers

1. Introduction

This Guideline applies to telephone numbers within the Bahamas geographic CO Codes. It identifies the duties of all Service Providers in respect of the aging and administration of disconnected Telephone Numbers.

This Guideline applies throughout the Bahamas and may be subject to modification by URCA in the event that number pooling or code sharing is adopted in Bahamas.

This Guideline is required because of the potential negative impact on customers who may be re-assigned telephone numbers that are not aged for an appropriate time period, as well as the potential inefficient use of numbering resources if numbers are aged too long.

The use of standardized Aging processes and intervals promotes the efficient management of Disconnected Telephone Numbers.

Appropriate enforcement mechanisms are required to ensure that all Service Providers comply with this Guideline.

2. Definition of Aging

Aging is the process of making a Disconnected Telephone Number temporarily unavailable for re-assignment to another customer for a specified period of time called the Aging Interval. The Aging Interval includes the Announcement Treatment Period which includes any Specific Announcement Treatment Period for the customer of record, as well as the Blank Telephone Number Intercept Period. A number is disconnected when it is no longer used to route calls to equipment owned or leased by the disconnecting customer of record. The Aging Interval commences on the date the number is disconnected and ends after the Aging Intervals specified in this Guideline. A Suspended Telephone Number shall not be considered to be a Disconnected Telephone Number for the purpose of this Guideline.

3. Purpose of Aging

The primary purposes of Aging are to:

- provide service providers time to fulfill their administrative requirements, e.g., billing cycle completion, emergency number record reconciliation, etc;

- allow service providers to provide their disconnecting customers with the opportunity to request Specific Announcement Treatment, e.g., referral to a new telephone number;

- minimize misdirected calls intended for the previous customer when the telephone number has been re-assigned to a new customer; and

- enable the disconnecting customer to re-connect service, using the same telephone number and service provider during the Aging Interval.

4. Aging Principles

a. The disconnecting customer's service provider shall be responsible for Aging, call treatment (e.g., Specific Announcement Treatment, blank number announcement, etc.).

b. The Aging Interval shall begin on the date that the telephone number is disconnected and end after the completion of the appropriate Aging Interval specified in COCAG and these Guidelines.

c. Once the Disconnecting Service Provider has initiated the Aging process for a Disconnected Telephone Number, the Disconnecting Service Provider shall not modify the Aging Interval unless requested by the disconnected customer or the Aging Interval is modified as a result of industry consensus and/or regulatory order in an NPA jeopardy situation.

d. A Disconnecting Service Provider shall not re-assign a telephone number that is being aged, except to re-assign the telephone number to the customer who originally disconnected the telephone number and who is reconnecting service with the Disconnecting Service Provider.

e. Aging Intervals for Disconnected Telephone Numbers shall be applicable to all Service Providers using North American Numbering Plan geographic numbering resources in the Bahamas.

f. Telephone numbers that are being aged shall not be made available for reservation to any entity, including the Disconnecting Service Provider or other customer, other than to the customer who disconnected the telephone number prior to Aging.

g. All Disconnected Telephone Numbers which have completed the Aging process shall be either: (a) returned immediately by the Disconnecting Service Provider to the Code Holder (which may be the Disconnecting Service Provider), or (b) reserved or held by the Disconnecting Service Provider for the customer who disconnected the telephone numbers

h. All Service Providers shall consistently apply Aging Intervals, as outlined in this Guideline, to all Disconnected Telephone Numbers which are assigned or ported to them.

5. Aging Intervals

The following Aging Intervals shall be applied by all Service Providers to Disconnected Telephone Numbers:

Class of Service	**Aging Interval in Months**

	Minimum	Maximum
Residential	1	3
Business	3	12 *
* The 12 month maximum may be extended to 15 months if required to accommodate local directory publishing dates or high volume call-in applications, or to a longer period if required to accommodate changes to numbers associated with public service emergency applications.		

Where URCA has declared an NPA in a Jeopardy NPA Condition, these intervals may be temporarily modified by regulatory directive.

Reserved and Held numbers which are released by the customer from reserved or held status shall not be subject to Aging.

6. Audit Process

Audits of service providers may be required to ensure that service providers adhere to this Guideline. Such audits should be performed in accordance with Appendix A of the Bahamas Central Code Assignment Guidelines. The audit should at a minimum:

1. compare the customer's requested Disconnect Date and telephone number with the service provider's actual Disconnect Date (and NPAC notification date for ported telephone numbers) and telephone number;
2. compare the actual Aging Interval applied with the applicable industry approved Aging Interval;
3. verify that if the Aging Interval was aborted, the telephone number was reconnected to the disconnecting customer and not to a new customer;
4. verify that the service provider is consistently applying the same Aging Interval to ported telephone numbers and non-ported telephone numbers.

7. Glossary

Aging

Aging is the process of making a Disconnected Telephone Number temporarily unavailable for re-assignment to another customer for a specified period of time, called the Aging Interval.

Aging Interval

The Aging Interval is the period of time that a Disconnected Telephone Number is made temporarily unavailable for re-assignment to another customer. The Aging Interval commences on the date the number is disconnected and ends after the appropriate Aging Intervals specified in this Guideline. The Aging Interval includes the Announcement Treatment Period.

Announcement Treatment Period

The Announcement Treatment Period is the period of time during which the Disconnecting Service Provider advises persons who call the disconnecting customer's telephone number that the number is no longer in service. It includes any Specific Announcement Treatment Period for the disconnecting customer of record (e.g., inform callers of the customer's new telephone number) as well as the Blank Telephone Number Intercept Period.

Blank Telephone Number Intercept Period

The Blank Telephone Number Intercept Period is the period of time during which the Disconnecting Service Provider advises persons who call the disconnecting customer's telephone number that the number is no longer in service.

Business Service

Business Service is a class of service that is used primarily or substantially for a commercial, industrial, professional, institutional, vocational or otherwise occupational purpose other than that of a domestic or family nature.

Disconnect Date

The Disconnect Date is the date upon which a customer's service and telephone number is disconnected (i.e., calls placed to the number will not be completed to the customer). See Disconnected Telephone Number.

Disconnected Telephone Number

A Disconnected Telephone Number is a number that is no longer used to route calls to equipment owned or leased by the disconnecting customer of record. A Suspended Telephone Number shall not be considered to be a Disconnected Telephone Number for the purpose of this Guideline.

Disconnecting Service Provider

A Disconnecting Service Provider is a service provider that has disconnected the customer's service and telephone number.

Effective Ported Release Date

The Effective Ported Release Date for ported telephone numbers is the date upon which the NPAC broadcasts the disconnection to all local Service Providers' Service Management Systems (SMSs), notifies the Code Holder of the disconnection of the telephone number, and the telephone number is returned to the Code Holder (i.e., snapback).

Held Telephone Number

A Held Telephone Number is a number which has been allocated by a Service Provider for the potential future use of a specific customer without payment by that customer.

Reserved Telephone Number

A Reserved Telephone Number is a number which has been allocated by a Service Provider for the potential future use of a specific customer under a legally binding agreement (e.g. a contract or tariff) at the request of the customer, with or without payment.

Residential Service

A service other than a Business Service, which is used primarily for domestic or family purposes.

Specific Announcement Treatment

Specific Announcement Treatment is the service, provided by the Service Provider to the disconnecting customer, which provides an announcement to persons who call the disconnected number advising that the telephone number is no longer in service and, in some cases, the customer's new telephone number.

Specific Announcement Treatment Period

The Specific Announcement Treatment Period is the period of time during which the Disconnecting Service Provider advises persons who call the disconnecting customer's telephone number that the number is no longer working and informs callers of the customer's new telephone number.

Suspended Telephone Number

A telephone number which is temporarily taken out of service by the service provider at the request of the customer (e.g., seasonal suspension of service at a cottage) or at the service provider's initiative (e.g., for non-payment of a bill).

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Form N1 (Part 1) – CO Code Application General Information and CO Code Request Form

1.0 Notes and Instructions

1.1 CO Code applicants are advised that this Form N1 is separated into the following forms which encompass the process for obtaining CO Codes from URCA:

Form N1 (Part 1):	General Information and CO Code Request
Form N1 (Part 2):	Routing and Rating Information (Optional)[1]
Form N1 (Part 3):	Confirmation of Code Activation

1.2 The applicant should complete all sections of the relevant form and be guided by the Central Office Code Assignment Guidelines (COCAG), and in particular, the Certificate as Section 2 must be completed and signed by an authorized officer of the Code Applicant.

1.3 Applicants should use a separate form for each CO Code request.

1.4 Mail or deliver the completed form to: The Director of Policy and Regulation, Utilities Regulation and Competition Authority, UBS Building Annex, East Bay Street, N4860 Nassau, The Bahamas, or fax the form to 1.242.393.0237.

1.5 Code assignments are granted subject to the condition that all Code Holders are subject to the Regulatory Framework in The Bahamas, in particular but without limitation, The Bahamas National Numbering Plan and COCAG in force from time to time.

1.6 A CO Code must, unless otherwise approved by URCA, be placed in service within 6 months after the initially published effective date.

1.7 The Code Applicant acknowledges that the information contained on this request form will be treated as confidential to the extent that URCA, in its discretion consider appropriate, taking into account any submissions in support of confidentiality made by the Code Applicant. Without prejudice to the foregoing, information requested for BIRRDS will become available to the public upon input into the database.

[1] The Code Applicant is not required to submit a completed Part 2 Form (Routing and Rating Information) to URCA. However, after a CO Code is assigned, it is the responsibility of the Code Applicant to enter, by itself or via an agent, the required Part 2 information into the Telcordia Traffic Routing Administration (TRA) BIRRDS databases in order to notify the telecommunications industry to activate the CO Code in the Public Switched Telephone Network (PSTN). This Form must be obtained from TRA.

2.0 Certificate

I hereby certify that the following information requesting a CO Code code is true and accurate to the best of my knowledge and that this application has been prepared in accordance with the currently applicable version of COCAG.

It is understood that the Code Applicant will return the CO Code to URCA for reassignment if the resource is no longer in use by the Code Applicant, no longer required for the service for which it was intended, not activated within the time frame specified in the COCAG (an extension can be applied for), or not used in conformance with COCAG.

Signature of Authorized Representative of Code Applicant

Title

Date

1.0 GENERAL INFORMATION

1.1 Contact information:

Code Applicant:

Entity Name:	_____	Contact Name:	_____
Address:	_____	City, Island:	_____
Telephone:	_____	Country:	_____
E-Mail:	_____	Facsimile:	_____

URCA Contact Information:

Name:	_____		
Address:	_____	City, Island:	_____
Telephone:	_____	Country:	_____
E-Mail:	_____	Facsimile:	_____

1.2 NPA: ____ LATA: ____ OCN: _____

Switch Identification (Switching Entity / POI)[2:] _____

Location Name _____

Route same as: NPA___ NXX ____ Use Same Rate Center as: NPA ____ NXX ____

1.3 Date of Application _____ Requested Effective Date _____[3,4]

Acknowledgment and indication of disposition of this application will be provided to Code Applicant as noted within ten working days from the date of receipt of this application.[5]

1.4 Type of Entity Requesting the Code:

a) Fixed Network Operator _____
Mobile Network Operator _____
Other (specify) _____

b) Type of service for which CO Code is being requested:
_____

[2] This is an eleven-character descriptor of the switch provided by the owning entity for the purpose of routing calls. This is the 11 character COMMON LANGUAGE Location Identification– (CLLI) of the switch or POI.

[3] The cut-over is a minimum of 45 days after the NXX code request is input into BIRRDS. To the extent possible, code applicants should avoid requesting an effective date that is an interval less than 66 calendar days from the submission of this form. It should be noted that interconnection arrangements and facilities need to be in place prior to activation of a code. Such arrangements are outside the scope of these guidelines.

[4] Requests for code assignment should not be made more than 6 months prior to the requested effective date.

[5] An incomplete form may result in delays in processing this request.

_____

c) Does your company have an Individual Operating Licence to provide the relevant service?

Yes ____ No _____

(i) If yes, indicate date of grant of Licence:

_____
_____

(ii) If no, explain:

_____
_____

1.5 Type of Request (Select One):

_____ Initial CO Code for new switching entity or new point of interconnection
_____ New CO Code request for existing switching entity or point of interconnection (Complete Section 1.7)
_____ Additional CO Code for growth (Complete Section 1.6)
_____ Update information
_____ CO Code Reservation only:[6]
  _____ Initial CO Code
  _____ New CO Code (Complete Section 1.7)
  _____ CO Code for Growth (Complete Section 1.6)

1.6 Additional CO Code Request for Growth

_____ I hereby certify that the existing CO Code(s) at this switching entity/POI is/(are) projected to exhaust within 6 months of the date of this application. This fact is documented on Form N3 and will be supplied to an auditor when requested to do so per Appendix A of the COCAG.

1.7 Code Request for New Application (See COCAG Section 4.2)

Basis of eligibility for an additional code means that there has not been a code assigned to this switching entity/point of interconnection for this purpose. (Check the applicable space and, if applicable, provide the requested information).[7]

____ CO Code is necessary for distinct routing, rating or billing purposes[8]

_____

_____

____ Other (Explanation required).

[6] When the Code Applicant is ready to place the code in service, the Code Applicant should complete a new request form.

[7] If eligibility is based on a category that requires additional explanation or documentation and URCA denies a request, the applicant has the option to pursue an appeals process.

[8] Any additional information that can be provided by the code applicant may facilitate the processing of that application.

_____

_____

1.8 Authorization for entry of BIRRDS information (Check applicable space).

_____ I have attached a completed Form N1 (Part 2). This is URCA's authorization to input/revise the indicated BIRRDS data. Further, I understand that URCA may not be the authorized party to input the data. The authorization and/or data input responsibilities are determined on an Operating Company Number level. If the Code Administrator advises me that said Code Administrator does not have Administrative Operating Company Number (AOCN) responsibility for my data inputs, I will contact Telcordia TRA to determine the correct AOCN Company. Upon that determination, I will submit Form N1 (Part 2) directly to the AOCN Company for input to BIRRDS.

_____ Form N1 (Part 2) of this form is not attached. BIRRDS input will be the responsibility of the Code Applicant. The 66 calendar day nation-wide minimum interval cut-over for BIRRDS will not begin until input into BIRRDS has been completed.

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Form N1 (Part 2) – CO Code Application Routing and Rating Information

As Part 2 Forms are developed by Telcordia Technologies Traffic Routing Administration (TRA) for data entry into Telcordia's BIRRDS rating database, Code Applicants should obtain the Forms and the related "Job Aid" directly from TRA web site at: http://www.trainfo.com/products_services/tra/documents.html

The Code Applicant is not required to submit a completed Part 2 Form (Routing and Rating Information) to the CO Code Administrator. However, after a CO Code is assigned, it is the responsibility of the Code Applicant to enter, by itself or via an agent, the required Part 2 information into Telcordia's BIRRDS database in order to notify the telecommunications industry to activate the CO Code in the Public Switched Telephone Network (PSTN).

Assistance in completing the Part 2 Form may be obtained from Telcordia TRA by calling 877-699-5577, by facsimile at 732-336-6999, by internet website at www.trainfo.com, or by sending an e-mail message to tra@telcordia.com.

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Form N1 (Part 3) – CO Code Application Confirmation of Code Activation

This Form should be submitted to The Director of Policy and Regulation, URCA, UBS Annex Building, East Bay Street, P.O. Box N-4860 Nassau, Bahamas

Code Applicant:

Entity Name:	_____	Contact Name:	_____
Address:	_____	City, Island:	_____
Telephone:	_____	Country:	_____
E-Mail:	_____	Facsimile:	_____
Date of Application:	_____	Date of Receipt:	_____
Date of Response:	_____	Effective Date:	_____

URCA's Contact Information:

Name: _____

Telephone: _____

Facsimile: _____

E-Mail: _____

By signing below, I certify that the CO Code (NXX) specified in Section 1 below is in service and that the CO Code (NXX) is being used for the purpose specified in the original application (See Section 6.3.3).

_____ _____
Authorized Representative of Code Applicant (Print) Signature

_____ _____
Title Date

1. NPA-NXX code: _____ - _____

2. Switch Identification (Switching Entity / POI)[1]: _____

3. Date of Application: _____

   In-Service Date: _____

[1] This is an eleven-character descriptor of the switch provided by the owning entity for the purpose of routing calls. This is the 11 character COMMON LANGUAGE Location Identification® (CLLI) of the switch or POI.

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Form N2 – Plant Test Code Application Form

A separate application form is required for each Plant Test Code requested.

Applications should be submitted to The Director of Policy and Regulation, URCA, UBS Annex Building, East Bay Street, P.O. Box N-4860 Nassau, Bahamas

URCA will treat the information on this form as confidential.

Date: _____ OCN: _____

Company Name: _____ Address: _____

Telephone: _____ _____

Fax: _____ City: _____

Contact Name: _____ Island: _____

E-Mail: _____ Country: _____

NPA in which Plant Test Code is Requested: _____

Plant Test Code will reside in Switch/POI CLLI: _____

Requested Effective Date of Assignment: _____

Date of Termination of Assignment: _____

I hereby certify that the plant test code will be used solely for plant testing purposes within the NPA identified above commencing on the Effective Date of Assignment and ending on the date of termination of assignment. I also certify that my company will cease use of the plant test code within 6 months of the effective date of the assignment of the code at the direction of URCA.

_____
Signature of Authorized Representative of Code Applicant

_____
Title

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CO Code Assignment Guidelines

Form N3 - Months to Exhaust Certification Worksheet[1]

This form should be submitted to The Director of Policy and Regulation, URCA, UBS Annex Building, East Bay Street, P.O. Box N-4860 Nassau, Bahamas

Date: _____

Company Name: _____

Switching Entity/Point of Interconnection (CLLI): _____

NXXs included in growth calculation: _____

Signature of Authorized Representative of Code Applicant: _____

Title: _____ Telephone No.: _____ Fax No.: _____

A. Telephone Numbers (TNs) Available for Assignment (See Glossary[2]): _____

		Month #1	Month #2	Month #3	Month #4	Month #5	Month #6
B.	Previous 6-month growth history[3]:	_____	_____	_____	_____	_____	_____
C.	Projected growth - Months 1-6[4]:	_____	_____	_____	_____	_____	_____
	Projected growth - Months 7-12[5]:	_____	_____	_____	_____	_____	_____

D. Average Monthly Growth Rate (From Part C above): _____

E. Months to Exhaust = $\frac{\text{Telephone Numbers (TNs) Available for Assignment (A)}}{\text{Average Monthly Growth Rate (D)}}$ =[5]

Explanation:

_____

[1] This Worksheet, or its equivalent, is required to be submitted to URCA. For audit purposes a copy must be kept in the applicant's files.

[2] Definitions of terms may be found in the Glossary section of the Central Office Code Assignment Guidelines.

[3] Telephone Numbers (TNs) assigned in each previous month, starting with the most distant month as Month #1, and Month #6 as the current month.

[4] TNs assigned in each following month, starting with the most recent month as Month #1. In a jeopardy situation, only 6 months growth projection is required.

[5] To be assigned an additional CO Code for growth, "Months to Exhaust" must be less than or equal to 12 months for a non-jeopardy NPA (See Section 4.2.1 of the Guidelines), or less than or equal to 6 months for a jeopardy NPA (See Section 8.4(c) of the Guidelines).

The Bahamas National Numbering Plan

Appendix 2 - International Mobile Subscriber Identity (IMSI) Assignment Guidelines

12 August 2011

Contents

1.0 Purpose and Scope

This document contains the Guidelines and procedures for the assignment and use of International Mobile Subscriber Identities (IMSIs) in The Bahamas.

1.1 The IMSI was created and formatted to provide the unique international identification of mobile terminals and mobile users and to enable these terminals and users to roam among networks which offer mobility services.

1.2 These assignment Guidelines pertain, in one section or another, to all segments of the IMSI - Mobile Country Code (MCC), Mobile Network Code (MNC) and Mobile Station Identification Number (MSIN), in sequential order. The MCC is assigned by the ITU to member countries. The IMSI administrator (URCA), participates in the management of all segments of the IMSI, but directly administers only the MNC segment. MNCs are assignable to operators of public networks offering mobility services with international roaming capabilities. The MNC uniquely identifies the home network of a mobility service subscriber. The remaining segment of the IMSI, the Mobile Station Identification Number (MSIN), is directly administered by the network operator to which the MNC is assigned.

1.3 These Guidelines apply throughout The Bahamas and do not supersede the regulations, procedures or requirements of URCA or any other appropriate legal or regulatory measures issued by URCA.

1.4 These guidelines are based on the content of International Telecommunications Union - Telecommunications (ITU-T) Recommendation E.212, *The International Identification Plan For Mobile Terminals and Mobile Users.* This Recommendation was revised in 2002. The content of this document is in conformance with that iteration of the Recommendation.

1.5 Forms referred to in these Guidelines can be downloaded from URCA's website at www.urcabahamas.bs.

2.0 IMSI Format and Function

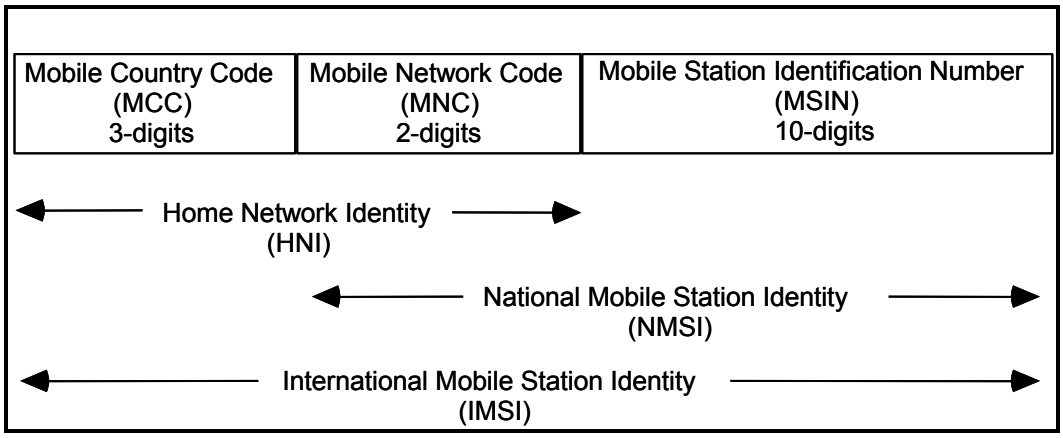
2.1 The IMSI format and function are based on ITU-T Recommendation E.212.

2.2 Each IMSI uniquely identifies the mobile terminal/user, the home network of the mobile terminal/user, and the home country of the network and of the mobile terminal/user.

2.3 The IMSI enables mobile terminals/users to roam among networks, domestically and internationally, by providing a uniform and unique home network and mobile terminal/user identification that is recognizable by all conforming networks. When transmitted between visited and home networks, the IMSI enables the exchange of subscription and billing information for the visiting mobile station. Specifically, the IMSI is used for:

- Determination of the mobile terminal's/user's home mobile network,
- Mobile terminal/user identification when information about a specific mobile terminal/user is to be exchanged between visited and home networks,
- Mobile station identification on the radio control path for registering a mobile station in a visited mobile network,
- Mobile station identification for signaling on the radio control path,
- Identification of the mobile terminal/user to allow for charging and billing of visiting mobile terminals/users, and
- Subscription management, i.e., retrieving, providing, changing, and updating subscription data for a specific mobile terminal/user.

2.4 The format of the IMSI in The Bahamas is:



2.5 The IMSI format in The Bahamas is a fixed 15-digit length -- the maximum allowable by Recommendation E.212. Each IMSI contains an MCC, an MNC, and an MSIN. The MNC is the segment of the IMSI directly administered by URCA. MSINs are administered directly by the network operator to which the MNC is assigned.

2.6 The function of the MCC is to identify the domiciliary country of a mobile terminal/user. By analyzing the MCC, a visited network can determine the country from which the mobile terminal/user originated and in which its home network resides.

According to Recommendation E.212, an MCC is three digits in length and is in the format NXX, where N equals any of the decimal digits 2-9, and X equals any of the decimal digits 0-9. MCCs are assigned by the ITU in response to formal requests from recognized national administrations of ITU-member countries. The MCC currently assigned to The Bahamas is "364".

2.7 The function of the MNC is to identify the home network, within the country associated with the MCC, of the visiting mobile terminal/user. The visited network uses the MCC-MNC combination to identify and query the home network of the visiting mobile terminal/user that is requesting service. MNCs in The Bahamas are two digits in length and in the format XX, where X equals any of the decimal digits 0-9. The 2-digit maximum is necessary so that, when combined with the 3-digit MCC, the visited network need not analyze more than 5 digits to determine the home network of the visiting mobile terminal/user- another Recommendation E.212 requirement. This format provides a mathematical potential of one hundred MNCs (00-99) for each MCC.

2.8 The function of the MSIN is to uniquely identify a mobile terminal/user within its home network. MSINs in The Bahamas are ten digits in length and in the format XXXXXXXXXX, where X equals any of the decimal digits 0-9. Recommendation E.212 limits IMSI length to a fifteen-digit maximum. Since The Bahamas IMSI format includes a five-digit MCC+MNC, a ten-digit MSIN is the maximum allowable. The ten-digit format provides ten billion MSINs per MNC or network, if no other function than mobile terminal/user identification is embedded in the MSIN.

2.9 The NMSI contains the MNC followed by the MSIN and is, therefore, a fixed twelve-digit length in The Bahamas. It is the national portion of the IMSI, i.e., excluding the MCC. Its length and format are, therefore, determined nationally, within the constraints of Recommendation E.212.

3.0 Assumptions and Constraints

These Guidelines are based on the following assumptions and constraints:

3.1 These Guidelines and procedures should provide the greatest latitude to those providing mobility services with international roaming capability, while permitting the effective and efficient management of a finite resource.

3.2 The function of the IMSI administrator will be performed by URCA, the administrator of The Bahamas National Numbering Plan (NNP).

3.3 Although the quantity of IMSIs currently allocated to The Bahamas is minimal, the demand at some time in the future will grow. However, if the need arises, planning for MCC exhaust and obtaining additional MCC resources are discussed in Section 11.

3.4 The Guidelines and procedures for IMSI assignment, as set forth in this document, remain in effect until there is either consensus or regulatory policy direction to change them.

3.5 These Guidelines do not describe the method by which IMSIs are transmitted across and processed by networks. Network interworking arrangements are contained in other standards, documents, or business agreements.

4.0 Assignment Principles

The assignment principles defined below allow network operators the greatest possible latitude in providing mobility service with international roaming and the users of these services/capabilities the widest possible roaming capabilities.

4.1 MNCs are to be assigned and used only by public networks offering mobility services with international roaming capability (Section 1. 1).

4.2 Upon application, URCA will assign one MNC for each valid network operator. Nothing shall preclude a network operator, however, from aggregating multiple or merged networks operated by multiple licensees within a single MNC.

4.3 The 5-digit MCC+MNC, as part of the 15-digit IMSI, is to be assigned so as to uniquely identify the home network of the mobility service user worldwide.

4.4 MSINs are assigned by network operators to their subscribed mobile terminals/users. An IMSI is unique to a single mobile terminal/user, but a mobile terminal/user may have multiple IMSIs.

4.5 IMSIs and MNCs shall be assigned to permit the most effective and efficient use of a finite resource in order to maximize the existing allocated resource inventory and to defer, as long as practical, the need to request additional MCC resources.

4.6 IMSIs are a public resource. The assignment of any portion of an IMSI (i.e., MNC, MSIN) does not imply ownership of the resource by either the entity to which it is assigned or by the entity performing the administrative function.

4.7 Should an assignee transfer control of an Individual Operating Licence, then the use of the assigned HNI is transferable to the new licensee.

4.8 URCA will:

- Assign MNCs in a fair, timely and impartial manner to any applicant that meets the criteria for assignment (Section 5).
- Assign MNCs on a first come, first served basis from the available pool of unassigned MNCs.
- Make all assignments based on the procedures in these guidelines (Section 7).
- Treat sensitive information received from applicants as proprietary and confidential.

4.9 Information that is requested of applicants in support of an MNC application shall be uniform and kept to a minimum.

4.10 Assigned MNCs should be deployed as soon as possible, but no later than twelve months after assignment. If the assignee can demonstrate that an assigned MNC has not been deployed solely due to delays beyond its control, the time period can be extended for up to 90 days. At the discretion of URCA, three additional 90-day extensions may be granted.

4.11 These guidelines have no effect on MNC assignments made prior to their approval. Use of all assigned resources shall be consistent with these guidelines.

4.12 An MNC recovered or returned to URCA for reassignment will remain dormant for a period of not less than one year, from the date of return to the MNC pool, before reassignment.

4.13 As required, applicants for HNIs must comply with all applicable regulations relative to the provisioning of mobility service with international roaming capability.

5.0 Criteria for MNC Assignment

The assignment criteria in the following paragraphs should be considered by a potential MNC applicant before submitting an MNC application and will be used by URCA in reviewing and processing an MNC application:

5.1 The MNC applicant must be, and certify that it is, a public network operator offering mobility services with international roaming for which an MNC is requested.

5.2 The applicant/assignee of an MNC must have and provide evidence of authorization, if required, from URCA to operate in the area in which it intends to provide mobility services.

5.3 An MNC will only be assigned by URCA upon receipt and approval of a completed *Form N4(A) - Mobile Network Code (MNC) Application.*

6.0 Responsibilities of MNC Applicants and Assignees

Entities requesting MNC assignments and entities already assigned one or more MNCs shall comply with the following:

6.1 MNC applicants and assignees must meet all conditions specified in these Guidelines.

6.2 Applicants must apply in writing to URCA by completing Form N4 (A) – Mobile Network Code (MNC) Application. Forms may be downloaded from URCA's website.

6.3 MNC assignees shall:

6.3.1 Assign and efficiently manage the MSINs (last ten digits of the IMSI) associated with the assigned MNC. Maintain up-to-date and accurate assignment records that match MSINs to mobile terminals/users. These records may be required for audit purposes.

6.3.2 Inform URCA of changes in the information associated with an MNC assignment by using Form N4(C) – Request for Change in Mobile Network Code (MNC) -Assignment Information. Changes may occur because of the transfer of an MNC, through merger or acquisition, to a different network (Section 4.7). The initial assignee of the MNC involved in a transfer occurring through merger, acquisition or other means must immediately inform URCA when such a change becomes effective. Timely submission of change information enables URCA to maintain accurate MNC assignment records.

6.3.3 Participate in the IMSI audit process, when requested (Section 9).

6.3.4 Deploy any MNC assigned by URCA within the time period specified (Section 5.10). Inform URCA of MNC deployment by submitting Form N4(B) -Mobile Network Code (MNC) Deployment.

6.3.5 Apply to URCA for an extension (Section 4.10) if the deployment requirement cannot be met and the MNC is still required.

6.3.6 Return to URCA, using Form N4(E) -Mobile Network Code (MNC) Assignment Return:

- Any MNC no longer needed for the provision of mobility services with international roaming capability,
- Any MNC not deployed within the time period specified, including extensions (Section 4.10), or
- Any MNC not used in conformance with these assignment guidelines.

7.0 Responsibilities of URCA

The role of URCA is to manage the entire IMSI resource and to directly administer the MNC segment of the IMSI. In this context, URCA shall:

7.1 Provide to the industry general and specific information on the structure and proper use and management of IMSIs.

7.2 Provide copies of these Guidelines and forms to MNC applicants and assignees, and assist them in completing the required forms.

7.3 Review and process MNC applications as follows:

7.3.1 Review the application to determine if all requested information is provided and credible. If not, return the application to the applicant requesting that any deficiency be corrected.

7.3.2 Inform applicants of the status of their requests in writing. There are three possible dispositions: approved, denied, or additional information required. Notify the applicant in writing of the disposition within ten working days from receipt of Form N4 (A). The response will include:

- If assigned, the specific MNC(s) assigned,
- If denied, the reasons for denial, and
- If additional information is required, specify the required information.

7.4 Use the following MNC assignment procedures:

7.4.1 URCA shall generally assign MNCs in numerical sequence within the MCC.

7.4.2 There may be technical considerations or limitations on the part of the applicant that require a specific assignment or preclude them being able to use the next consecutive MNC assignment.

7.4.3 Applicants eligible for multiple MNCs may request that such MNCs be assigned in the next available block of numerically sequential codes (except for those MNCs reserved or unavailable for assignment, pursuant to Section 7.4.2 or any subsequent addenda to these guidelines). In such cases, a separate Form N4 (A) should be submitted for each MNC required, along with a cover letter requesting their assignment in a sequential block.

7.4.4 When reassigning an MNC that has been returned or reclaimed, URCA will ensure that the MNC has remained dormant for the required period (Section 4.13).

7.5 Maintain accurate and current MNC assignment records. Update the records as required to respond to requests for changes in assignment information reported by MNC assignees (Section 6.3.2). Respond to these requests in writing within ten working days.

7.6 Publish, at least monthly, via the agreed medium, a list of assigned MNCs. The list will include the MNC number, the MNC assignee, and the entity contact and number. Track the number of IMSIs assigned and the assignment rate and report this data regularly to the appropriate industry forum.

7.7 Investigate any MNC that has not been deployed within the required time frame, and issue extensions if appropriate (Section 4.10). Notify the appropriate industry forum if an assignee fails to deploy an assigned MNC within two extensions.

7.8 Reclaim assigned MNCs (Section 8), as needed.

7.9 Direct the IMSI conservation program and conduct periodic audits, as required, of MNC assignee records (Section 9).

7.10 Inform The Bahamas electronic communications industry, via the agreed method, of any revisions to these guidelines (Section 11).

8.0 MNC Return and Reclamation Procedures

8.1 Assignee responsibilities:

- Assignees must return MNCs that are no longer required, not deployed, or not used in conformance with these assignment guidelines (Sections 4.10, 6.3.5 - 67.3.6).

- Assignees must cooperate with URCA in carrying out its reclamation and auditing responsibilities.

8.2 URCA's responsibilities:

- URCA will contact any MNC assignee identified as not having returned to URCA, for reassignment, any MNC no longer required, not deployed, or not used in conformance with these assignment guidelines (Sections 4.10, 6.3.5 - 6.3.6).

- URCA will first seek clarification from the assignee regarding any alleged non-use or misuse. If the assignee provides an explanation satisfactory to URCA, and in conformance with these assignment guidelines, the MNC will remain assigned. If no satisfactory explanation is provided, URCA will by letter to the assignee withdraw the MNC for non-use or misuse. URCA will then make the MNC available for reassignment following the required dormant period (Section 4.13), if any.

9.0 IMSI Resource Conservation and Assignment Audits

9.1 Assignment and management of The Bahamas IMSI resources are undertaken with the following conservation objectives:

- To efficiently and effectively administer/manage a limited resource through code conservation, and
- To eliminate or delay the exhaust potential for the MCC currently assigned to The Bahamas.

The process to achieve these objectives should not impede the introduction of competitive services utilizing IMSI station identifiers.

9.2 The ITU-T will require a compelling reason for the allocation of more than 1 billion MSINs and 100 MNCs -- the number in The Bahamas inventory based on the format described above -- to one country. To promote the efficient and effective use of numbering resources, audits of MNC assignments may be performed to ensure consistent compliance with these guidelines.

9.3 URCA will track and monitor IMSI assignments and assignment procedures to ensure that all segments of the IMSIs are being used in an efficient and effective manner. Ongoing URCA procedures that foster conservation shall include, but not be limited to, the following:

- An active reclamation program to reclaim unused or misused MNCs;
- Strict conformance with these guidelines by those assigning MNCs and MSINs;
- Appropriate and timely modifications to these guidelines to enhance text that may have allowed inefficient use of IMSIs and MNCs; and
- Periodic specific and random audits of assignments and assignment procedures (Section 9.4).

9.4 URCA may conduct an audit of an MNC assignee's assignment records. The audit may be precipitated by a complaint from outside URCA's organization or by URCA itself. The purpose of an audit will be to verify the MNC assignee's compliance with the provisions set forth in these guidelines.

9.4.1 These audits will be conducted at the MNC assignee's premises or at a mutually agreed to location and at a mutually agreed to time.

9.4.2 URCA will not copy or remove the information from the premises nor will they disclose the information to non-URCA personnel.

9.4.3 URCA will expect to review the following information to ensure conformance with these guidelines and the proper use of the IMSI resource:

- Verification that not more than one MNC is assigned per network or Individual Operating Licence;
- Verification of assignment for each working MSIN;
- Date of assignment of each working MSIN;
- Activation date of each working MSIN;
- Indication of MSIN assignment to end users; and,
- Status and status date of each MSIN unavailable for assignment; i.e., MSINs assigned for testing, reserved, aging, pending and/or suspended.

9.5 Audit results should be used to identify and recommend specific corrective actions that may be necessary. Examples of specific corrective actions which may implement are as follows:

- Modifications to these assignment guidelines to reflect the specific circumstance revealed by the audit;
- Additional training for MNC assignees concerning the assignment guidelines;
- Return of assigned MNCs;
- Requirements for supporting documentation of future MNC requests in non-compliant situations; or,
- Modifications to the process in which records are maintained or MNCs are assigned.

9.6 Audit results with respect to MNC assignee information and/or recommended MNC assignee process modifications shall be treated on a proprietary and confidential basis.

9.7 Failure to participate/cooperate in an audit shall result in the activation of MNC reclamation procedures (Section 8).

10.0 MCC Relief Planning

10.1 When 80% of the MNCs within the MCC assigned to The Bahamas have been assigned, or assignments are exceeding 10% of the resource per quarter, URCA will inform the ITU-T.

10.2 URCA will request additional MCC resources for The Bahamas from the ITU-T.

11.0 Maintenance of Guidelines

11.1 URCA shall review these Guidelines in accordance with the review schedule for The Bahamas National Numbering Plan.

11.2 URCA may also review these Guidelines where necessary to meet changing and unforeseen circumstances.

11.3 Questions regarding these Guidelines or requests for specific changes to these Guidelines should be made to URCA. URCA shall have absolute discretion to accept, reject or defer any request for modification of the Guidelines.

11.4 Questions or concerns regarding the maintenance of the Guidelines may be directed to URCA's Director of Policy and Regulation.

12.0 Glossary of Terms

Conservation - Consideration given to the efficient and effective use of a finite resource in order to minimize the cost and need to expand its availability while at the same time allowing the maximum flexibility in the introduction of new services, capabilities and features.

MNC assignee - The entity to which an MNC has been assigned for the provision of mobility services with international roaming capability.

Home network - The network of the service provider to which a given mobile terminal/user is subscribed.

International Mobile Subscriber Identity (IMSI) - The string of decimal digits, up to a maximum of 15 digits, that identifies a unique mobile terminal or mobile subscriber internationally. The IMSI consists of three fields; the MCC, the MNC, and the MSIN.

Mobile Country Code - The first field of the IMSI that is 3 digits in length. An MCC either identifies a country or a group of Networks that share an MCC for international services.

Mobile Network Code - The second field of the IMSI that is 2 digits in length, The MNC, in combination with the MCC, uniquely identifies the home network of the mobile terminal or mobile user.

Mobile Subscriber - An entity or person that contracts to receive or pay for a mobility service.

Mobile Subscriber Identification Number (MSIN) - The third field of the IMSI that is a maximum of 10 digits. The MSIN within a given MCC+MNC identifies a unique mobile terminal or mobile subscriber within a public network.

Mobility Service – An electronic communications service that supports mobility for terminals or users by providing access to and from the public network via a home network and/or visited network(s).

Mobile Terminal - Any portable, transportable, or handheld terminal supporting mobility service.

Mobile User - A user that utilizes a subscription to a mobility service in order to access a mobility service.

Visited network - The network providing service to a subscriber when the subscriber roams outside the home network.

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Appendix 3 – Signalling Area Network Code (SANC) and International Signalling Point Code (ISPC) Assignment Guidelines

12 August 2011

Contents

1.0 Purpose and Scope

This document contains the Guidelines and procedures for the assignment of International Signalling Point Codes (ISPC) from within the Signalling Area Network Codes (SANC) assigned to The Bahamas by the Director of the International Telecommunications Union/ Telecommunication Standardisation Bureau (ITU/TSB).

1.1 SANCs are assigned to ITU Member States (Administration) which, in turn, are responsible for the assignment of ISPCs within their respective countries. The Administration may delegate this function to another entity within the country. In The Bahamas, the Administration is URCA.

1.2 These Guidelines apply throughout The Bahamas and do not supersede the Communications Act 2009 or instructions or regulatory measures issued by URCA , or any other appropriate approvals required.

1.3 These Guidelines are based on the content of ITU-T Recommendation Q.708 - Assignment Procedures for International Signalling Point Codes.

2.0 Principles

In accordance with the ITU-T Recommendation Q.708,

2.1 URCA has responsibility for the assignment of ISPCs in The Bahamas

2.2 The assignment of ISPCs shall be done in a fair and efficient manner (only a single ISPC will be assigned to a signalling point).

2.3 The assignment of an ISPC confers use of the resource but does not imply ownership by the assignee and the resource may not be sold, licensed, traded or transferred (except in the case of merger, acquisition, divestiture, or joint venture).

2.4 The assignment of ISPCs may be made for test purposes. However, they should not be considered permanent and will be subject to reclamation and reassignment. The use of ISPCs for test purposes should not exceed one year. Should the test terminate before one year, URCA should be notified within thirty days, in order that the ISPC may be returned to the ISPC resource pool. The entity using the ISPC for test purposes may apply for the assignment of the same ISPC for the provision of services on a permanent basis, in accordance with these guidelines.

3.0 Assignment Criteria

The following criteria must be met before an ISPC will be assigned to any applicant:

3.1 The applicant must provide a service that is authorized by URCA.

3.2 The applicant must have implemented or is about to implement a signalling point having at least one Message Transfer Part (MTP) signalling relation in the international signalling network.

3.3 The applicant must provide all the requested information on the attached application form (Form N5) and forward the application to URCA's Director of Policy and Regulation.

4.0 Assignment Policy

4.1 ISPCs will be assigned to qualified applicants by URCA from the SANCs assigned to The Bahamas by the Director of the TSB. All assignments will be forwarded to the TSB for publication in the Operational Bulletin. Assignments must be made within one calendar month of receiving the application or the applicant must be notified why the assignment cannot be made. URCA may determine if the ISPC has been activated after 18 months, commencing on the date of assignment. If the ISPC has not been implemented, URCA shall reclaim the ISPC or the applicant can inform URCA of the circumstances in order to determine if further or different action is appropriate. Additionally, ISPCs should be reclaimed if they are no longer in use, being used by an unauthorised operator, or being used for purposes other than for which they were assigned. On an annual basis, the owners of ISPCs are required to inform URCA on the "usage" of these codes, verifying whether they are still in use.

4.2 SPCs assigned from the SANCs assigned to the Bahamas by the TSB shall be used only in the Bahamas. Similarly, ISPCs from SANC assigned to countries other than the Bahamas, shall not be used in The Bahamas. Should ITU-T Study Group 11 decide that ISPCs may be used in countries other than one to which the corresponding SANC codes have been assigned, these guidelines will be modified to reflect this change.

The Bahamas National Numbering Plan
Form N5 – Application for International Signalling Point Code (ISPC)

A separate application form is required for each ISPC requested.

Applications should be submitted to The Director of Policy and Regulation, URCA, UBS Annex Building, East Bay Street, P.O. Box N-4860 Nassau, Bahamas

1. **Name of Applicant (Provide Name of Company)**		
2. Address of Applicant		
3. Contact Name • Address • Telephone# • Fax # • E-mail		
4. Is Applicant Member of ITU If YES go to 7	YES	NO
5. If No, is Applicant Familiar with ITU Recommendation Q.708 If YES go to 7	YES	NO
6. If No, Applicant is Required to Confirm that Applicant is familiar with Q.708		
7. Applicant Complies with Q.708		
8. **Location of Switch (Town, Address)**		
9. **Unique Name of Switch (If Available)**		
10. Inservice Date of Signalling Point (Month/Year)		
11. Nature of use of Signalling Point (Circle as many that apply- SEE Q.708 for abbreviations)	• STP • SCCP Relay • ISC • LR • SOP	• SEP (SP without STP) • GMSC • DMC • SSP • Other (Specify)
12. Signalling Point Manufacturer and Type		
13. Identify One Planned MTP Signalling Relationship • Name of Distant Operator • Address of Distant Switch		

• Other	

The Applicant expressly agrees and acknowledges that:

1. The allocated ISPC will be used in The Bahamas.

2. items 1, 8 and 9 will be transmitted by URCA to the ITU for publication.

3. The allocated ISPC will not be sold, licensed or traded to any other network operator or organisation or company.

4. The Applicant will not transfer the allocated ISPC to any other network operator.

5. In the case of merger the Applicant will notify URCA and initiate discussions on continued use of the allocated ISPC.

6. On an annual basis or as per URCA rules prevailing at the time, the Applicant shall confirm, in writing, to URCA, the location and address of the switch to which the ISPC was allocated.

7. Before moving the allocated ISPC from one switch to another, the Applicant shall inform URCA and obtain their concurrence. The town and address of the new switch (i.e., item 8) and unique name of the switch (i.e.. item 9) will be transmitted by URCA to the ITU for publication.

_____ _____ _____

Signature of Applicant City Date

(Senior Management or
Designated Representative
Should sign this application)