Office of Utilities Regulation

The Jamaican National Numbering Plan

A Consultative Document

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Document No. Tel 2002/03
Office of Utilities Regulation

ABSTRACT

In compliance with Section 8 of the Telecommunications Act 2000, the OUR has assumed the function of Jamaican National Numbering Plan Administrator – transferring this function from Cable & Wireless Jamaica – and developed a numbering plan (presented in this document) that should satisfy current and realistically predictable future numbering needs of carriers and service providers. This new numbering scheme sets out explicit and objective criteria for the assignment of numbering resources to provide evenhanded access, for all service providers, to those resources, and thereby support effective competition. Changes to the existing numbering arrangements that could have cost implications for operators and their customers are kept to a minimum.

This consultative document outlines the OUR's proposals for the National Numbering Plan for Jamaica and discusses procedural and cost issues with regard to the administration, management and use of telecommunications numbers in Jamaica. Comments and opinions are invited on all positions set out therein. Given the potentially broad socio-economic impact of numbering policy decisions, the OUR is seeking as wide an audience as possible to debate issues of benefits, challenges and drawbacks in relation to the positions in this document. Respondents should also point out relevant issues that the OUR may have failed to consider.

After consideration of all responses, the OUR will issue a second consultative document to provide clarifications or revisions of its positions. At the end of the consultation period, the OUR will issue a determination on the numbering policy for Jamaica along with a set of rules which will govern the assignment and use of numbering resources in Jamaica.

Comments are due by June 6, 2002 and should be sent to: -

Curtis N. Robinson
Office of Utilities Regulation
3rd Floor
PCJ Resource Centre
36 Trafalgar Road
Kingston10

E-mail crobinson@our.org.jm

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Comment from Interested Parties

Persons who wish to express opinions on this Consultative Document are invited to submit their comments in writing to the OUR. Comments are invited on all aspects of the issues raised, and in particular the specific questions posed. A summary of these questions is provided in an annex.

Responses to this Consultative Document are due by **June 6, 2001**, and should be sent by post, fax or e-mail to: -

Curtis N. Robinson
Numbering Administrator
3rd Floor
PCJ Resource Centre
P.O. Box 593, 36 Trafalgar Road
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Fax: (876) 929-3635
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Information considered confidential should be submitted separately and clearly identified as such. In the interests of transparency, respondents are requested to avoid confidentiality markings wherever possible. Respondents are encouraged to supply their responses in electronic form, so that they can be posted on the OUR's Website (or a link included where the respondent wishes to post its response on his/her own website).

Comments on responses

The responses to this Consultative Document form a vital part of the consultation process, and so far as possible, should also be publicly available. Respondents will therefore have an opportunity to view and comment upon the responses received from other contributors. Comments may take the form of either correcting a factual error or putting forward counter arguments. **Comments on responses are requested by June 13, 2002.**

Arrangements for viewing responses

To allow responses to be publicly available, the OUR will keep the responses that it receives on files, which can be viewed by, and copied for, visitors to the OUR's Offices. Individuals who wish to view the responses should make an appointment by contacting the Communications Manager **by** one of the following means:-

Telephone: (876) 968 6053 (or 6057)
Fax: (876) 929 3635
E-mail: mailto:dgeddes@oru.org.jm

Individuals may request photocopies of selected responses at cost price. Copies may also be ordered by post by sending a checque made payable to "Office of Utilities Regulation." (the contact details above may be used to find out the correct amount).

The consultation schedule is tabulated below:

EVENT	DATE
Issue of this Consultative Document by the OUR	May 6, 2002
Response to this Consultative Document by interested parties	June 6, 2002
Comments on respondents' response	June 13, 2002
Issue of determination notice by the Office	June 28, 2002

CHAPTER 1: INTRODUCTION

Purpose of Document

1.1 The Telecommunications Act 2000 stipulates that the Office, "In carrying out its functions (under section 8 – numbering)…shall develop a plan for the numbering of telecommunications services and may make rules pursuant to that plan regarding the assignment and use of numbers by carriers and service providers".

1.2 This document sets out, for consultation purposes, the Office's review of the existing national numbering structure, and the Office's proposals for the development of a National Numbering Plan that is flexible and which will be duly responsive to the newly competitive telecommunications market. The document is intended to initiate public discussions, and to invite both general and detailed comments of all interested parties, on a range of issues concerning current and future numbering arrangements and on the approaches needed to safeguard the interests of all industry participants

Structure of Document

1.3 The document is structured around the following broad issues:

- ✍ Existing numbering arrangements (Chapters 1 & 2)
  Examines the background and status of current numbering arrangements, and lays out the context for proposed changes.
- ✍ Numbering resource to be administered (Chapter 3)
  Reviews the essential features of relevant numbering resources and presents options for specific uses in the local industry.
- ✍ Revised Jamaican National Numbering Plan (Chapters 4 & 5)
  Sets out proposals for a new numbering scheme and associated rules to meet current and predictable future industry numbering needs and support effective competition.
- ✍ Administrative procedures and funding options (chapters 6-8)
  Recommends procedures for numbering administration and management responsibilities; discusses Jamaica's potential participation in the Traffic Routing Administration processes, reviews and makes recommendations on alternative funding methods for the numbering administration functions.
- ✍ Annexes
  A number of supporting documents and a glossary of terms are annexed.

Relevant Document and Legislation

1.3 The Telecommunications Act 2000, Section 8, provides the legal framework for this consultative document.

CHAPTER 2: NUMBERING IN PERSPECTIVE

2.1 The establishment of a suitable and stable framework for the liberalization of the telecommunications sector and the promotion of fair and open competition in that marketplace are key strategic imperatives of the Government, in Jamaica's emergence as an information society, and the development of commerce and industry in general. Numbering has been recognized as an important driver of telecommunications developments and has become a key competitive factor in the telecoms industry.

The Importance of Numbers

2.2 Telecommunications numbers are an indispensable means to route calls through the networks, to identify and reach customers and services. Numbers are also used to determine the tariff for calls; they are therefore important to the billing process, and for customers to work out the expected cost of a call. The availability, and mode of allocation, of numbers, could influence the way operators engineer their networks – possibly with consequential costs to both operators and their customers. These and other reasons make fair and equitable access to numbering resources of vital importance to effective competition – and so the need for an appropriate numbering policy to ensure that the development of a competitive telecommunications market is not disadvantaged on numbering grounds.

2.3 The supply of numbers currently available to Jamaica is finite, but its exhaustion is not an immediate threat. Currently, Jamaica has a potential stock of 8 million numbers available for public telecommunication use into the foreseeable future. Nevertheless, the husbandry of these numbering resources must be done in an efficient and effective manner to make the best use of them and safeguard supplies to meet future needs that may not be apparent at present.

2.4 The challenge therefore, is to develop a numbering plan that will fulfill the foregoing broad objectives, and support effective competition by ensuring fair and non-discriminatory access to numbering supplies by telecommunications operators and services providers. At the same time, where reasonably practicable, the plan, especially as it relates to the allocation of central office codes and non-geographic codes for specific service access, should give customers a broad indication of service and charge before they make a call; this latter principle is often applied through service branding of specific number ranges.

The Basic Model for a Jamaican National Numbering Plan

2.5 The North American Numbering Plan (NANP) is the basic numbering scheme for the Public Switched Telephone Networks located in the United States and its territories, Canada, Bahamas, Bermuda, Dominican Republic, and 15 Caribbean

nations, including Jamaica. The NANP is significantly uniform throughout the area it serves.

For example, the address structure used for routing telephone calls through the network currently has a fixed 10-digit format: NXX-NXX-XXXX, where N = digits 2-9 and X = digits 0-9, sometimes expressed as ABC-DEF-GHIJ.

<table>
<tr><td>NXX</td><td>NXX</td><td>XXXX</td></tr>
<tr><td rowspan="2">Area Code</td><td>Central Office Code</td><td>Station Number</td></tr>
<tr><td colspan="2">Directory Number</td></tr>
</table>

2.6 The initial three digits are termed the Numbering Plan Area (NPA) code (commonly called the area code). The next three digits are called the central office code. The last four are the line or station number. The last seven digits, comprising the central office code and the line number, form the directory number, which is the telephone number with which people are most familiar.

2.7 The new Jamaican National Numbering Plan, however, must incorporate any existing local departure from the NANP (for instance, in the use of certain short codes for access to common services such as directory assistance) which are mutually acceptable norms for customers, operators and service providers, so long as they do not inhibit changes that are requisite for the development of a competitive service environment.

2.8 Proposals for changes, whether envisaged by this document, or recommended by industry players, must focus not only on the decisions to be taken, but the way in which the implementation of such numbering decisions will be managed - inappropriately managed changes could prove costly, disruptive and unpopular.

2.9 As there is at present, in the view of the Office, no need for a radical departure, the propositions in this document adhere, to a great extent, to the existent North American Numbering Plan (NANP), and as such, also conform to international numbering conventions having global application, such as the ITU-T Recommendations, e.g., E.164 and E.212.

Brief History of Numbering Administration for Jamaica

2.10 Prior to May 1997, NANP-based numbers assigned to Jamaica were administered by The North American Numbering Plan Administrator in keeping with the shared "809" NPA code arrangement. Then at the request of the govemment, Jamaica was assigned a new NPA code: 876. Central Office codes already assigned in the 809 NPA for Jamaica were duplicated in the new 876 area code, with all new assignments made in the new NPA only, thereafter. The dialling plan for the new 876 NPA remained the same as used in the 809 NPA.

Administration and management of central office codes under the 876 NPA became the responsibility of the incumbent telecommunications service provider, Telecommunications of Jamaica Limited (now Cable & Wireless Jamaica Limited).

2.11 As in the case of most liberalized telecoms markets, the introduction of competition in the local industry called for the separation of operational and regulatory activities in the area of numbering. Consequently, the Office of Utilities Regulation was mandated by the Telecommunications Act 2000 to assume responsibility for the administration and management of telecommunications numbering in Jamaica.

CHAPTER 3 THE CURRENT STATUS OF NUMBERING

3.1 This Section of the document analyzes the current allocation of Central Office (CO) codes within the Numbering Plan Area (NPA) Code "876". We use the word "allocation" intentionally to differentiate between it and "assignment". To allocate a numbering resource is to identify its intended use, e.g., geographic, wireless, special services, by the telecommunications sector. To assign a numbering resource is to reflect the allocation by actually assigning a specific block(s) of the resource to service providers to use for the stated purpose (allocation).

3.2 The Numbering Plan currently in effect is structured as follows:

CO CODE	CURRENTLY ALLOCATED FOR
1XX	Abbreviated dialling
2XX	Growth (specific allocation to be determined as needed)
3XX	Cellular
4XX	Growth (specific allocation to be determined as needed)
50X-54X	Special services
55X-59X	POTS
6XX	POTS
70X-76X	Generally POTS
77X-79X	Generally cellular Prepaid
8XX	Generally cellular
9XX	Mostly POTS

3.3.1 As with all geographically defined NPA codes within the NANP, there is a mathematical availability of 8 million numbers for assignment, within the ranges 2XX-9XX. On a purely mathematical basis, this quantity of numbers should be sufficient for Jamaica for the foreseeable future. Consequently, unless something dramatic and unforeseen should occur that has not been identified at the time of this writing, there should not be a need for an additional NPA code in Jamaica for at

least the next 20 years – the traditional time period for a viable NPA resource. Such a conclusion does not mean that conservation methods should not be utilized, particularly (in this section) with regard to the use and organization of ranges of numbers, i.e., 2XX-9XX.

3.4 The current allocation of number blocks in Jamaica shows that:

?	Geographic	=	3.2 million (55X-59X, 6XX, 70X-76X, 9XX)
?	Wireless	=	2.3 million (3XX, 77X-79X, 8XX)
?	Special Services	=	0.5 million (50X-54X)
?	Growth	=	2.0 million (2XX, 4XX*)
			8.0 million

* (100,000 numbers assigned to wireless service)

3.5 There are exceptions to these categorized allocations that have occurred over time and during the period when Jamaica was a portion of the "809" NPA code, previously shared by all the Caribbean countries of the NANP. The categories reflect the predominant use of the numbering ranges.

Geographic Resource Allocation

3.6 Based on population statistics, fixed network penetration, the generally low CO Code fill rates (as provided by C&WJ) and predictions for fixed versus wireless (mobile) growth in Jamaica, it is safe to conclude that there are adequate geographic numbering resources currently allocated in Jamaica. The Office believes that the potential level of fixed network competition in Jamaica will not change this conclusion. Although the 9XX range is almost fully allocated to C&WJ (as the range previously allocated to Jamaica within the shared "809" NPA code), there is adequate capacity within the other ranges allocated to geographic use for competitive service providers. If this is not the case in the long-term, growth capacity exists within the 2XX and 4XX ranges.

3.7 However it is necessary now to develop a plan with the respective code holder to clear blocks of non-geographic codes from these generally geographic-based ranges, by transferring subscribers to other more appropriate blocks. For example, those blocks of codes designated as "cellular" or "cellular prepaid" should be eliminated from these geographic ranges and transferred to cellular (Wireless) ranges. Such blocks include, but not necessarily limited to: 700, 707, 909, 919, and 990, 995, 997, 999. In developing such a transfer plan, the Office would consider the gains of such transfers versus the costs to both operators and the subscribers. One way forward, and where possible, would be to plan the transfers as the codes are needed later when they may have a lower fill. This approach, however, could mean an indefinite delay of transfers. At a minimum, however, no additional

subscribers should be assigned to these codes and no additional similar codes should be allocated in a similar manner.

3.8 Less than a year ago, Cable & Wireless Jamaica (C&WJ) furnished the Office with information on specific resource allocations and utilization. In some instances, the information indicated services that no longer require unique code allocations, e.g., Ring Test (959), Datapath (709). These codes should be reallocated to the purpose for which the range in which they reside is allocated. In other instances, there are services that are actually POTS but are uniquely identified with their own allocations, e.g., DID and SNS. The affected codes should be reallocated as POTS. The comments in this paragraph may also apply to blocks of codes allocated to wireless and special services. The result of this industry effort should be a final and accurate list of allocated, assigned, and available codes to be administered and managed by the Office as the Jamaican NNP Administrator.

Wireless Resource Allocation

3.9 The wireless resources are currently separated into three applications. The 77X-79X ranges for C&WJ cellular prepaid, the 8XX range is allocated mainly to C&WJ cellular, and the 3XX range to competitive cellular service providers. It is the OUR's intention to evolve the 3XX and 8XX ranges to eventual joint use by all cellular providers.

3.10 The 77X-79X ranges, allocated to cellular prepaid, is currently interspersed with POTS numbers. This range could therefore, be transferred, over time, to the cellular ranges. Based on current fill rates, projected cellular growth, and the expressed intention to evolve the 3XX and 8XX ranges for use by all cellular providers, these resources are currently adequate for wireless use for a considerable period of time. If, and when, additional resources are required, as with the geographic category, there will be adequate room for growth into the 2XX and/or 4XX range.

Special Services Allocation

3.11 A set of codes is traditionally set aside for "special services". Typically, the codes selected for allocation to special services are codes that are easily recognizable by subscribers, e.g., all codes with a "0" in the B and C digits (200, 300, ... 900), all codes with triplicated digits (222, 333, ... 999), and/or all codes with the same numbers in the B and C digits (233, 244, ... 977, 988). The purpose of using easily recognizable numbers is that there is usually a unique aspect to special services, e.g., billing, that requires easy customer recognition to avoid misunderstanding and misdials. The range of codes, 50X-54X, was previously allocated for special services. The current use of these codes is unclear. The Office intends to study the use of these resources and the potential advantages of allocating easily recognizable codes for special services with the result of eventually clearing the 50X-54X range for another allocation, e.g., expanding the entire 5XX range for POTS.

Growth Allocation

3.12 The 2XX, and 4XX (except for 15 codes assigned to cellular), ranges are properly allocated to growth. The two miscellaneous codes 468 and 415, allocated for international audiotext and Jamaica Communications, respectively, should be cleared. Industry consensus will be sought for the determination of how, when, and for what these resource can eventually be allocated. There is currently no foreseen specific requirement. They should, however, not be squandered for miscellaneous and unrelated individual allocations except those identified as "easily recognizable" as defined above.

General Analysis

3.13 Some of what is stated in this section is already stated above, but due to its significance, bears repeating in a consolidated section. Most of the forecasts and recommendations made in this and the above sections are in the context of the current and projected population of Jamaica. When forecasts are made by service providers, with regard to their future subscriber expectations, there must be a test of reality applied. For example, when two of the current mobile service providers each predict 1Million subscribers, it must be assumed that these predictions are exaggerated, taken together. These combined predictions roughly equal 80% of the population of Jamaica. Factoring in the expectations of the third mobile operator, it is not realistic to expect the penetration of mobile services to reach every man, woman, and child in Jamaica. Even assuming a more conservative aggregate growth of mobile service to be a 50% market penetration (still very aggressive), only 1.3 million numbers would be required. It is assumed, as is the case in most developing competitive environments, that such exaggerated predictions include the marketing expectation that each service provider will "steal" the subscribers of its competitor(s) – so the same subscribers are counted multiple times by these providers.

3.14 The above sections make it dear that there is adequate capacity within the 876 NPA Code for Jamaica to avoid the need to request an additional NPA Code for the foreseeable future. This conclusion is, of course, based on:

- ? implementation of the recommendations mentioned above
- ? adherence to normal code utilization and conservation methods by both the industry and the Office
- ? development and implementation of fair and equitable resource Assignment Guidelines
- ? control of services and capabilities that could use inordinate quantities of numbers in an inefficient manner.

3.15 Growth of services and subscribers in Jamaica will certainly occur within the fixed-line sector, but nowhere near as dramatically as within the mobile sector. This disproportionate growth is evident in every country worldwide, but is particularly prevalent in countries where the fixed-line infrastructure has not been fully

deployed and where it makes no economic sense to do so. In these countries, the future growth in telecommunications infrastructure will be wireless.

3.16 The use of numbering resources will grow proportionate to the growth in sectors, i.e., as the current growth figures suggest, proportionately more numbering resources may be required for wireless services than for fixed services in the future within Jamaica. Specifically, the current allocation of 3.2 million numbers to fixed services is certainly adequate for Jamaica and probably is excessive. As Geographic allocation is usually more inefficient and more so when there are a number of operators serving the same area, it may be appropriate in the future to consolidate the assignment of codes within these ranges so that additional resources can be allocated to wireless services. The Office should ensure that all blocks of these 3.2 million numbers are not assigned for use and can, therefore, be reallocated in the future without subscriber inconvenience.

3.17 Currently 2.3 million numbers are allocated to wireless services. This is adequate for the future as long as all resources will be shared broadly among the service providers, i.e., service provider identification is not required within the dialed digits. In either case (service provider identification or not), there is adequate capacity (2 million numbers) for further growth of wireless numbers within the currently spare ranges of numbers (2XX and 4XX).

3.18 There is a natural concern with regard to new services/capabilities requiring the assignment and use of large quantities of numbering resources. However, some analysts observe that most of these service schemes do not get deployed because the services are either not required by the users, are not profitable, or are addressed by more globally acceptable standards. However, one such service/capability that is currently utilizing large quantities of numbers in an inefficient manner (in the US) is Efax/Jfax. The providers of this service have been acquiring blocks of numbers throughout the geographic NPA codes and utilizing them quite inefficiently. The risk to Jamaica is not necessarily the introduction of this service in Jamaica, but the potential attempt by the service providers to acquire blocks of numbers from the Jamaican resources for their service NANP-wide, e.g., establishing a call centre in Jamaica. A potential numbering anomaly such as this should be carefully monitored and controlled. Without such monitoring and control by the Office, there is a risk that such services could utilize disproportionate Jamaican resources and potentially cause the exhaust of the 876 NPA Code. Some United States (state) regulatory authorities have imposed such controls within their jurisdiction.

3.19 Specifically with regard to the Efax/Jfax service, many see this service as a short-term, albeit profitable, service that maps IP and E.164-based addresses. The long-term capability that will provide this mapping worldwide is ENUM. ENUM utilizes numbering resource in a much more efficient manner, i.e., no new E.164 numbers are necessary for this capability. Once the ENUM capability is deployed, it is understood by some, that the Efax/Jfax service will become obsolete.

3.20 It is difficult, if not impossible, to predict what other type services/capabilities might appear on the scene in the future. Most such services appear rapidly as the implementation of a creative service provider and are, therefore, not predictable and can't be forecast. To all appearances, there are no additional services on the immediate horizon. However, as mentioned elsewhere in this document, the Office needs to create a COCUS[1]-like forecasting mechanism that requires local service providers to forecast, on a regular basis, their current and anticipated use of numbering resources. There is a danger that service providers could be so occupied with implementing a competitive environment as to honestly, not thinking that far ahead at this point. A COCUS-like system will require service providers to be more forward thinking and will provide to the Office the information it needs, on a regular basis, to determine what, if any, conservation methods should be deployed in Jamaica.

3.21 In conclusion, it is the Office's firm belief that adhering to the above recommendations regarding the allocation of code blocks within the NNP will ensure adequate resources for Jamaica for the foreseeable future.

3.22 The Office invites comments on the current state of numbering and seeks responses to the following questions.

Question 1: What are your views in relation to the future demand for numbering resources?

Question 2: Do you agree with the Office's assessment of the adequacy of existing supply of codes for the foreseeable future?

Question 3: Should the 77X-79X ranges be transferred to the cellular ranges?

Question 4: What specific changes to the existing numbering arrangements would you recommend, and what time frames for their implementation?

1. COCUS = Central Office Code Utilization Survey

CHAPTER 4: NUMBERING RESOURCES TO BE ADMINISTERED BY THE OFFICE

4.1 The previous chapter analyzed the National Numbering Plan in the context of the current allocation of Central office (CO) codes within the Numbering Plan Area (NPA) Code '876'. This chapter identifies and describes the numerous resources, including CO codes, to be considered for administration by the Office, as the Jamaican NNP Administrator (JNA). These resources include:

1) Central Office Codes (NXX) for 876 area
2) Carrier Identification Codes (CIC)
3) Personal Communications Service N00 NXX Codes
4) 555-XXXX Line Numbers
5) 900-NXX Codes
6) International Inbound 456-NXX Codes
7) Vertical Service Codes
8) 800-855 Line Numbers
9) ANSI SS7 Point Codes
10) SANC/ISPC
11) IMSI
12) SID
13) DNIC
14) 8XX (Toll Free) Numbers

Central Office Codes (NXX)

4.2 CO Codes are a part of the NANP telephone number format. They are assigned only to identify initial destination addresses in the Public Switched Telephone Network (PSTN), not addresses within private networks. Examples of uses for CO codes include plain old telephone service (POTS), Centrex, Direct Inward Dialling (DID), cellular mobile service, pagers, data lines, facsimile, coin phones, and customer owned pay phones.

4.3 The 10-digit North American Numbering Plan (NANP) area address is made up of three parts, in the format NXX-NXX-XXXX. The first group of three characters (NXX) is the Numbering Plan Area Code (NPA); the second group of three characters (NXX) is the Central Office Code (CO Code); and the third group of characters (XXXX) is the subscriber's line number. In the above format NXX-NXX-XXXX: N = 2 to 9 and X = 0 to 9).

4.4 In any NPA, there is a maximum of 800 possible CO Codes. However, the following are not assignable as CO Codes:

- any N11 Service Code (i.e., 211, 311, 411, 511, 611, 711, 811, 911),

- any N00 code (i.e., 200 300, 400, 500, 600, 700, 800, and 900),

- projected future home and neighboring NPAs
- any codes allocated or assigned for special purposes such as 555 for information services, 950 Feature Group B Access, 976 for local pay per call services, and Local Plant Test Codes (i.e., 958 and 959[1])

4.5 CO Codes should be assigned to permit the most effective and efficient use of a finite numbering resource in order to prevent premature exhaust of the NPA and, thereby the NANP in general, and delay the need to develop and implement costly new numbering plans. Efficient resource management and Code conservation are necessary due to the impacts of expanding the numbering resource.

4.6 CO Codes are assigned locally by the CO Code administrator within the NPA. In NPA 876, CO Codes are assigned by the Office and should be done in a fair and impartial manner to any Code Applicant that meets the criteria for assignment as set out in the Jamaican Central Office Code Assignment Guidelines. Code Applicants must comply with all requirements of telecommunications Act that apply to the services that they wish to provide.

Carrier Identification Codes

4.7 Carrier Identification Codes (CICs) were developed to enable the routing and billing of telecommunications traffic from the local access service providers to specific inter-exchange and other service providers within the North American Numbering Plan (NANP) telecommunications network. Each CIC, in the XXXX format, identifies a service provider that has purchased Feature Group B (FGB) and/or Feature Group D (FGD) access services from the local access service provider.

4.8 Feature Group B (FGB) CIC: A FGB Carrier Access Code (CAC) is a dialling sequence (comprised of seven digits) that can be used by the general public to access a preferred long distance service provider. The CAC is presently in the format of 950-XXXX, where the XXXX is the Carrier Identification Code (CIC).

4.9 Feature Group D (FGD) CIC: The FGD CIC, like FGB, allows for trunk side access to the local access provider by another service provider and in addition, it allows for pre-subscription to a chosen long distance carrier. If a user wishes to place a long distance call via a long distance carrier to which the telephone is not pre-subscribed, then the appropriate FGD CAC must be dialed first; it is in the format of 101XXXX. The casual dialling sequences to access the carrier to which the telephone is not pre-subscribed is 101XXXX + 1/0 + Area Code (NPA) + the telephone number.

[1] See paragraph 3.8

4.10 Carrier Identification Codes in Jamaica are North American Numbering Plan (NANP) Resources and are assigned according to the Industry Numbering Committee (INC) Carrier Identification Code Assignment Guidelines. CIC Codes are assigned exclusively by the North American Numbering Plan Administrator (NANPA). Jamaican-based network operators should apply for these codes through the Office. This process would ensure that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

4.11 The NANP resources are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered, or leased by the assignee for a fee or other consideration. If a resource is sold, brokered, bartered, or leased or a fee, the resource is subject to reclamation by the Administrator.

4.12 It is believed that based on the anticipated level of competition in Jamaica, that less than 10 CICs would ever be assigned to Jamaican service providers. CIC assignment and use is currently restricted to fixed networks.

Personal Communications Services N00-NXX Codes

4.12 The Personal Communication Service is sometimes referred to as "follow me" personal communication services or, in North America, as “500 Service”. It allows the customer to participate in a user-defined set of subscribed services, and to initiate and/or receive calls based on some combination of a personal number, terminal number, and a service profile across multiple networks at any terminal, fixed or mobile, irrespective of geographic location. Service is limited only by terminal and network capabilities and restrictions imposed by the personal communication service provider.

4.13 500-NXX codes are assigned to 500 Service Providers according to the Industry Numbering Committee Personal Communications Services N00 NXX Code Assignment Guidelines. Assignments for this type of service are from Service Access Code (SAC) 500 and upon its exhaust, from Easily Recognizable Code (ERC) 533. Thus the assignment guidelines refer to the more generic "N00-NXX" rather than "500-NXX”.

4.14 The format for 500 numbers is 500-NXX-XXXX where the prefix (NXX) indicates the 500-service provider, and the line number (XXXX) identifies the subscriber as well as indicates the particular premium service. Since the identity of the service provider is embedded in the number, 500-service is not portable at this time. 500-NXX codes, each subsuming a block of 10,000 numbers, are assigned to Service Providers, who in turn assign individual numbers to their customers. Potential customers in search of a particular 500 number should view current assignments on the NANPA website, find the NXX for the number they want, and contact the service provider listed to determine if the number they want is available.

4.15 500-NXX assignments are made in accordance with the INC Personal Communication Service NOO-NXX Code Assignment Guidelines. 500-NXX codes are assigned exclusively by the NANPA throughout the NANP. Jamaican-based network operators should apply for these codes through the Office. This process ensures that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

4.16 Similar to all other NANP resources, PCS N00-NXX code(s) are a public resource and administrative assignment of the codes does not imply ownership of the resource by the entity performing the administrative function, nor does it imply ownership by the entity to which it is assigned. The assignment of a PCS N00-NXX code(s) by the code administrator implies the use of that code(s) by the code recipient/holder for personal communication services.

4.17 These codes are certainly available to Jamaican service providers should they decide to utilize them. However, their use in other NANP-served countries, including Canada and the US, has decreased recently to practically zero. There has been little interest in uniquely identifying PCS services in the dialed digits. A determination must be made as to whether Jamaica should consider the use of the 500 codes for PCS.

555-XXXX Line Numbers

4.18 The '555' NXX has been set aside in every geographic NPA code (area code), including NPA 876 in Jamaica, for the purpose of reaching a wide variety of information services but may include other future services as well. Although these resources have been available since 1994, few have ever been placed in service.

4.19 This numbering resource is in the format 555-XXXX where the XXXX line number will be assigned to the entity offering the particular information service. 555-XXXX line numbers are assigned according to the Industry Numbering Committee (INC) 555 NXX Assignment Guidelines. These guidelines are expected to apply throughout NANP Area subject to procedures and constraints of the NANP Area administrations and do not apply for the assignment of 555 numbers in N00 SACs.

4.20 555 numbers may be assigned for either national or regional (non-national) use. A national number is a unique line number in the 555 XXXX assigned to an entity for use in all or most of the geographic NPAs in the NANP Area. A number will be designated as a national number if it is to be used in at least 30% of all NPAs, states, or provinces in the NANP Area. National numbers cannot be assigned to any other entity. A non-national number is a line number in the 555 NXX assigned to an entity for use in a specific geographic area or areas (NPAs, states, or provinces). A number will be designated non-national if it is to be used in fewer than 30% of NPAs or states or provinces. Non-national numbers are available for assignment to multiple entities, assuming those entities wish to use the non-national

number in different geographic NPAs. Assignments made within Jamaica, only, would likely be considered a regional number, but this is not set out explicitly in the INC 555 XXXX Assignment Guidelines.

4.21 555 XXXX line numbers in Jamaica are North American Numbering Plan (NANP) resources and are assigned according to the Industry Numbering Committee (INC) 555-XXXXAssignment Guidelines. 555 XXXX line numbers are assigned exclusively by the NANPA. Here in Jamaica, network operators should apply for these codes through the Office This process ensures that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

4.22 XXX line numbers are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered or leased by the assignee for a fee or other consideration.

4.23 ugh many of these numbers were initially assigned to service providers in a lottery several years ago, there is no indication that any such numbers (other than 1212 – for directory assistance access) are in use today. The interconnection and tariff arrangements have been determined to be too difficult for the limited customer use. It is recommended therefore that Jamaica not consider the use of these resources.

900-NXX Premium Service Codes

4.24 900 numbers are used for access to premium services offered by a carrier's subscriber. When these services are accessed, the calling party pays for call set-up and the specific services associated with the 900 call, and the cost of calls to these services is normally billed to the calling party. The cost of making such calls is normally significantly higher than other PSTN-based services. The intended services to be supplied by 900 subscribers are information services.

4.25 900 numbers are in the format 900-NXX-XXXX, where the prefix (NXX) is assigned to the carrier. The carrier assigns the individual line numbers (XXXX) to their subscriber that offers the premium service. In order to access the information service provider, the calling party dials (1)+900-NXX-XXXX. The Local Exchange Carrier will perform a 6-digit translation of the 900 NXX portion of a 900-NXX-XXXX number in order to identify the carrier for call routing. The carrier will route the call to the information service provider. Use of the 101XXXX Carrier Access Code prefix is not consistent with NXX assignment and routing and, therefore, is not permitted. 900-service is not portable, at this time, since the identity of the service provider is embedded in the number.

4.26 900 NXX assignments are made in accordance with the INC 900 NXX Assignment Guidelines. 900 NXX codes are assigned exclusively by the NANPA throughout the NANP. Jamaican-based network operators should apply for these codes through the Office This process ensures that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

4.27 900 NXX resources are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered or leased by the assignee for a fee or other consideration.

4.28 However it is important to point out that this is another service-based resource that is "dying on the vine". In North America, Uses for this service for pornographic entertainment (stricter regulatory controls are being introduced) and the extremely high charges for calls to many of the services, have caused the public to shy away from dialling "900 numbers". However, there is a set of valuable services for which the resources are still used in North America, e.g., "900 WEATHER" for access to worldwide weather forecasts. Consideration may be given to requesting a resource if service providers see any potential use for them. However, with the availability of the 1XX resource for access to similar services, there may not be any requirement for these resources in Jamaica.

International Inbound NPA 456

4.29 NPA 456 and its associated NXXs enable the routing of inbound international calls for carrier-specific services, particular to a service provider's network, to and between NANP area countries. The routing to the appropriate carrier will be determined at the originating end of the call, i.e., within the network of the foreign administration. The 456 NPA is used to identify that the call is destined to a specific public telecommunications network in the NANP Area. The NXX following the 456 NPA identifies the carrier. The NANP area international gateway switch would be considered the public switched destination point for the inbound international call. The gateway operator then determines the subsequent routing of the call.

4.30 It is not intended that the implementation of these codes change or revise the uniform settlements or pro rata return traffic practices between NANP Area carriers and international telecommunications organizations (ITOs) or violate any legal/regulatory requirements incumbent upon network operators. Further, these codes are not to be used for the routing of calls between different locations within the same NANP area country.

4.31 456 NXX assignments are made in accordance with the INC International Inbound NPA Assignment Guidelines. 456 NXX codes are assigned exclusively by the NANPA throughout the NANP. Here in Jamaica, network operators should apply for these codes through the Office. This process ensures that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

4.32 456 Codes are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered or leased by the assignee for a fee or other consideration.

4.33 Only an international carrier can utilize this resource. CWJ is currently the only entity in Jamaica that can apply for a 456 resource.

Vertical Service Codes

4.34 Vertical Service Codes (VSCs) are customer-dialed codes in the *XX or *2XX dialling format for touch-tone and the 11XX or 112XX dialling 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 network service providers such as local exchange carriers, inter-exchange carriers, and wireless (cellular) carriers. For example, Call Forwarding is activated by dialling *72 or 1172.

4.35 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).

4.36 VSCs may be required and 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.

4.37 It is expected that it will be necessary at some point in time to expand the supply of VSCs in order to avoid exhaust of the *XX resource. VSC expansion plans will be treated separately and are not included in the assignment guidelines. To facilitate expansion planning, *2X and *3X ranges should not be assigned unless International Numbering Council (INC) agrees on an expansion plan which negates such a restriction. *1X will be assigned only after all other *XX codes (other than *2X and *3X) have been assigned.

4.38 Network providers assigned VSCs under the terms of the assignment guidelines will not act upon an end-user dialled VSC passed to an interconnecting network either before or after call answer unless agreed upon through individual business arrangements.

4.39 Inconsistency currently exists in the use of VSCs for specific features or services. The VSC Assignment Guidelines do not address or resolve this situation, but should be considered an attempt at standardizing future assignments. Therefore, the assignment of a VSC by NANPA for a particular service or feature should not be considered assurance that the assigned code can be used without conflict anywhere in the NANP (North American Numbering Plan) area.

4.40 PSTN providers will have the option of using VSCs assigned according to the VSC Assignment Guidelines and in doing so will be responsible for making any

necessary changes or modification to switches or dialling-instructions to accommodate code usage.

4.41 VSC assignments are made in accordance with the INC Vertical Service Code Assignment Guidelines and are assigned exclusively by the NANPA throughout the NANP. Jamaican-based network operators should apply for these codes through the Office. This process ensures that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

4.42 Assignments of this resource do not confer exclusive use of an assigned VSC upon the assignee.

4.43 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 be aware.

4.44 A determination will have to be made as to how they should be utilized within Jamaica, e.g., uniquely within Jamaica or in harmony with assignments in other NANP-served countries.

800-855 Line Numbers

4.45 800-855 numbers are used for the purpose of accessing public services on the Public Switched Telephone Network (PSTN) intended for the deaf, hard of hearing, or speech impaired. 800-855 are assigned to services used by deaf, hard of hearing, or speech-impaired persons to access a Telecommunications Relay Service (TRS), Message Relay Service (MRS) or any other entity via text telephone service (TTY).

4.46 To provide control over the 800-855 number assignment and to guarantee, to the extent possible, the dedicated use of 800-855 numbers according to these guidelines, the 800-855 numbers will remain unavailable for normal assignment or reservation through the 800/SMS system (see section 4.88).

4.47 800-855 line number assignments are made in accordance with the INC 800-855 Number Assignment Guidelines and are assigned exclusively by the NANPA throughout the NANP. It is not clear what the demand for such services is, in Jamaica. Jamaican-based network operators should apply for these codes through the Office. This process ensures that code assignments are made only to authorized domestic entities, based on Jamaican regulations.

International Mobile Subscriber Identifier (IMSI)

4.48 IMSIs are currently utilized by GSM-, CDMA-, and TDMA-based wireless networks for the purpose of identifying a roaming subscriber and that subscriber's home network. The technical capability for ANSI-41-based networks to utilize IMSIs is documented, but is not implemented in most countries today – a

worldwide implementation is yet to be agreed. Similarly, fixed networks are authorized to use IMSIs for the provisioning of mobility services, but there is no known use by these networks at this time. A further description of IMSI purpose, utilization, and format is contained in the ITU Recommendation E.212 and the draft IMSI Assignment Guidelines contained in another section of this document. Please refer to the latter document for the IMSI format.

4.49 Since each country is assigned at least one Mobile Country Code (MCC) – Jamaica is assigned MCC "338" – the resources within each country code must be administered within that country. Normally, a centralized administrator, such as the Office, administers the Mobile Network Codes (MNC) within their MCC and each service provider administers the Mobile Subscriber Identification Numbers (MSIN) within their MNC(s). The Office should, therefore, administer the MNCs within the MCC "338". Service providers within Jamaica should not be utilizing IMSIs from any other country, including other countries served by the North American Numbering Plan (NANP), e.g., the United States.

4.50 However, due to the complexity of routing the signalling messages necessary for sending queries to a roaming subscriber's home network, when that network is in an integrated numbering plan such as the NANP, it appears that IMSI assignments by countries within the NANP-serving area should be coordinated. If such co-ordination does not occur, when a NANP-served subscriber roams into a non-NANP country and seeks mobility services, the visited network will not be able to determine the location (country) of the roamer's home network, due to the need to perform a "global title translation". The result of this translation is that the visited network attempts to use a set of digits starting with the E.164-based Country Code (CC) and the E.212 Mobile Network Code (MNC) (e.g., "1 + 234" = CC+MNC) to route the query message.

4.51 The result, using the above example, is that the visited network recognizes the "1" as the 18 countries of the NANP, but, if there is a "234" MNC in more than one of the NANP-served countries, the visited network does not know which of the 18 countries should receive the query message. Under this circumstance, the query message cannot be sent and the roamer would be denied service, or the query message might be sent to the incorrect home network and improper billing would occur.

4.52 This issue is currently under study by the IMSI Oversight Council (IOC), a US-based industry forum responsible for IMSI administrative issues in the US. Once this issue is resolved, the Office will need to determine the impact of the resolution on its administrative responsibilities. At least for the present, the US IMSI Administrator has been directed, by the US mobility industry, to assist the IMSI Administrators in other NANP-based countries in this coordinative responsibility. The IMSI Administrators in NANP-based countries other than the US should contact the US administrator when an IMSI is to be assigned in their country. The US administrator will first inform the non-US Administrator which MNCs are not

currently assigned in the US. Both administrators will then determine what MNC should be assigned in the non-US country. Once that determination is made, the MNC is assigned in the non-US country and shown as "reserved" in the US assignment database. This process ensures that the same MNC is not assigned in multiple NANP-based countries, thereby, preventing the conflict described above.

4.53 For now, the Office should adhere to the above procedure when assigning IMSIs in Jamaica. This is, of course, a resource unique to Jamaica (within its own MCC) and assignments are to be made locally, not through the NANPA. The Office will, however, make contact with the US and Canadian IMSI Administrators in order to determine what level of coordination is required with regard to these assignments, as detailed above.

SS7 (Signalling System No. 7) Point Codes

4.54 ANSI SS7 Domestic Point Codes

SS7 point codes are unique numbers assigned to each SS7 network node or signalling point and are effectively the name and address of that signalling point. The codes are used for routing, discrimination and distribution functions performed on SS7 signalling messages at each signalling point. There are three kinds of signalling points in the SS7 network (as illustrated below):

- SSPs (Service Switching Points) which are telephone exchanges equipped with software for SS7 functions, and are responsible for originating, terminating or switching calls.

- STPs (Signal Transfer Point) which are packet switches that provide an efficient way of routing signalling messages to their proper destination; they eliminate the need for direct links between signalling points

- SCPs (Service Control Points) which are databases/database functions that provide information necessary for, advanced call-processing. STPs and SCPs are provided in pairs for security against network failures.

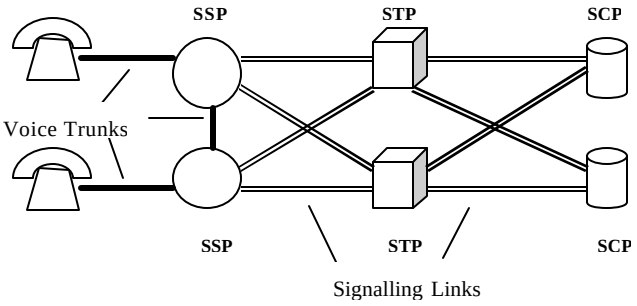


Figure 1.

SS7 Signalling Network

Signalling information is used to setup, manage and release voice calls, and support telephony services such as caller ID, Toll Free calling (sections 4.80 - 4.90), and mobile authentication and roaming services (sections 4.43 – 4.58).

The SS7 point code consists of three 8-bit binary octets, known as Network Identification, Network Cluster, and Cluster Member, respectively. Each Octet has possible assignment values of 0000 0000 to 1111 1111, translating to 0 to 255. In decimal numbers the structure appears as:

0-255	0-255	0-255
Network ID	Network Cluster	Cluster Member

An example of a cluster member identifying a node in the SS7 Network would appear as 5-121-208 in decimal format.

4.55 Normally a large network would be assigned a network ID code including all of the Network Cluster and Cluster Member codes with the Network ID Code for approximately 255 X 255 = 65000 cluster members. A small network that provides its own STP functionality is normally assigned a Network Cluster Code, including its 255 Cluster Member Codes. Very small networks are normally assigned Cluster Member Codes in groups of four.

4.56 The American National Standards Institute (ANSI) Telecommunications Standards Committee T1 covers SS7 Technical Standards and related issues. Detailed technical standards describing SS7 are available in the ANSI T1 T1.100 Series Standards. ANSI T1 111.8 is the current reference document outlining the numbering and assignment of SS7 codes.

4.57 The SS7 Point Code Administrator in the US assigns codes to networks in all NANP-served countries, based on SS7 Assignment Guidelines developed and maintained by ANSI's Committee T1S1.

4.58 Some SS7 Point Codes have already been allocated to Jamaican network operators. These resources should continue to be available to and utilized by Jamaican network operators. Applications should be processed through the Office and the Office should be in contact with the SS7 administrator.

Signalling Area Network Code - International Signalling Point Codes (SANC ISPCs)

4.59 SANC ISPCs are used to identify international signalling points in the International Signalling System No. 7 Network, as opposed to the national (ANSI) SS7 Network. In the International Network, the point code, used to identify a signalling point, is intended to be processed within the Message Transfer Part (MTP) of the signalling point or signalling transfer point.

The ISPC is a 14 bit binary code, which is broken down into three parts as shown below:

	NML	KJIHGFED	CBA
	3 bits	8 bits	3bits
Decimal range	0-7	0-256	0-7
	|	SANC	| SPI |

4.60 Where SANC is the Signalling Area/Network Code and SPI is the Signalling Point Identification. The SANC plus the SPI is the International Signalling Point Code (ISPC).
An example of an ISPC assigned in Jamaica to C&WJ is 3-076-1.

4.61 The ITU assigns SANC Codes to national administrations and the allocation of the ISPCs to domestic-based Signalling network operators within international Signalling gateways is the responsibility of the administration. The assignment of International Signalling Point Codes is conducted in accordance with ITU-T Recommendation Q.708, and the Draft Jamaican Guidelines for the Assignment of Signalling Area/Network Code- International Signalling Point Codes.

System Identifiers (SIDs)

4.62 System Identifier Codes (SIDs) are assigned to cellular and PCS service providers 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 and, when it detects the SID being transmitted from a base station, the mobile station will indicate a home or roam status to the mobile operator.

4.63 The SID range 8176 to 8191 was assigned to Jamaica via IFAST/TR 45 - meaning there are 16 SIDs that can be assigned in Jamaica. Generally, no new SID ranges are being assigned to countries, except in the case where a new country emerges. The IFAST is the International Forum on AMPS Standards Technologies and is sponsored by the Alliance for Telecommunications Industry Solutions (ATIS). The assignment of SIDs in Jamaica is the responsibility of the Office. If SIDs are assigned in Jamaica that are not in the right range, the Office should inform the IFAST and request their assistance for a conflict resolution with the country that may be assigned the SIDs actually in use in Jamaica.

4.64 There appears to be an adequate number of SIDs allocated to Jamaica.

Data Network Identification Codes (DNICs)

4.65 Data Network Identification Codes (DNICs) are used to identify a country and a public data network, or a group of public data networks within the country, on an international basis. The DNIC is made up of the Data Country Code (DCC) and the Network Digit. In decimal format, the DCC is 3 digits in length and the Network Digit is 1 digit in length in the format XXXZ, where X is 2 through 7 and Z is 0 through 9. There are ten DNICs in each DCC.

4.66 The ITU assigns the Data Country Codes to national administrations and the allocation of the DNICs to domestic-based international data network operators is the responsibility of the administration. DCC 338 has been assigned to Jamaica.

4.67 The assignment of international Data Country Codes and Data Network Identification Codes is conducted in accordance with ITU-T Recommendation X.121.

N11 Codes, 1XX Codes, and Other Abbreviated Resources

4.68 Abbreviated dialling resources, within the NANP, are generally defined as any set of numbers less than 7 digits in length, i.e., fewer digits than a local call, and that can be dialled and completed to a destination address. Abbreviated dialling resources are valuable both to the public and to telecommunications service providers. The public appreciates the ability to dial less than the normal number of digits for emergency services and for other services dialled on a frequent basis. Not only does it require less than the normal number of dialed digits, but the abbreviated set of numbers are easier to remember for frequent dialling situations. Service Providers see abbreviated resources as an advantageous method of providing easy subscriber access to popular network-based services.

4.69 Abbreviated dialling resources are generally categorized into three groups – Public Interest, Common, and Service Provider-Specific.

- Public Interest – abbreviated sets of numbers for public access to health and safety related services, e.g., police, fire, ambulance. These numbers must be nationally uniform.
- Common – abbreviated sets of numbers for public access to non-emergency services that should nonetheless be nationally uniform for ease and frequency of use, e.g., Directory Assistance, Time, and Weather.
- Service Provider-Specific – a range of abbreviated sets of numbers, all of which are available to each service provider to use in the offering of unique network-based subscriber services.

4.70 Abbreviated dialling resources are limited within the format of the NANP. Their currently implemented NANP-wide formats are N11 – 8 codes – and *XX(X) –

Vertical Service Codes (see Section 4.34). Additionally, in Jamaica, the 1XX format is also allocated for abbreviated dialling.

4.71 Several years ago, there was a NANP-based study by the Industry Numbering Committee (INC) to determine if there should be another format(s) for abbreviated dialling resources. This study resulted in a list of potential resource formats, but did not result in an implemented format. All the potential resource formats employed combinations of numerical digits and symbols, e.g., #XX, #XXX. This report is available from the INC secretariat.

N11 Codes

4.72 Since there are only 8 codes in the N11 format – 211-911 – their assignment and use must be controlled and, if deemed to be in Public Interest category, mandated. In all NANP-served countries, the regulatory authority is the body that determines and mandates the assignment, use, and implementation of these resources. There is no standard for the use of these codes; each country within the NANP is free to determine what is in their best public interest for these resources. These codes currently have "reserved" status in Jamaica. It is desirable that the assignment, use, and implementation that is most appropriate for Jamaica be determined with industry consultation. However, it strongly recommended that those codes that are deemed to be in the Public Interest category be mandatorily implemented on every public switched network in Jamaica - fixed and wireless.

1XX Codes

4.73 The 100 codes in the format 1XX have been allocated for abbreviated dialling applications in Jamaica. The use of these codes for abbreviated dialling is not the "norm" within the NANP-served area. The United States and Canada, for example, have deliberately determined not to utilize these resources for diallable codes, although there is some consideration for their potential future use as such in an expanded NANP. However, within these countries the 1XX resources have been in use for decades as intra-network codes for use between nodes, e.g., test codes, operator access codes. Additionally, IFAST (International Forum on ANSI-41 Standards Technology) has created International Roaming MINs (IRMs), in the format 0/1XXX, for all ANSI-41-based wireless networks. These IRMs are utilized worldwide, in ANSI-41 networks, to enable international roaming. However, the use of IRMs has been determined to be a temporary solution to international roaming; the long-term solution will be the use of IMSI (International Mobile Station Identifier). Consequently, the use of the 1XX codes involves the potential for conflicts, which must be considered when utilizing them for diallable access to public network-based services. It seems, however, that the potential for any significant conflicts is minimal in Jamaica.

4.74.1 Here, in Jamaica, the use of these codes for 3-digit dialling access in the existing fixed line environment is limited to the 11X range - by virtue of the use of the 1+

dialling procedure, e.g., for inter-parish calls: 1+NXX-XXXX, and therefore the conflict where the initial digits dialed are 12 to 19. One way to make the full set of 1XX resources available to the fixed line network for use as access codes would be to substitute 00+ (assuming only standard prefixes are allowed) for the 1+ prefix. Alternatively, the industry could consider the use of the number sign "#" after 1XX, as the end-of-dialling indicator; this option would require no change of the toll prefix.

4.75 There are network/industry implications for these alternatives. The 1+ dialling procedure, in its most common present usages in the NANP, implies toll or 10-digit dialling. 00+, like 0+, traditionally is used for operator-assisted calls. Substituting 1+ with 00+ would be unconventional, and the implications for future network arrangements are not clear - in the context of the NANP expansion plans that currently are under consideration.

4.76 Despite the forced dialling of the extra control digit, 1XX(#) seems a more graceful, and efficient way to make the full set of 1XX resources available to the fixed line network. The bracketed number sign, (#), denotes optional use.

4.77 The 1XX resources are very valuable and may be used as substitutes for some of the other Numbering Resources as indicated earlier.

4.78 Having made the decision to allocate these resources in Jamaica for abbreviated dialling, the Office should ensure that this limited quantity of valuable codes is administered in a controlled but fair and equitable manner.

Other Abbreviated Resources

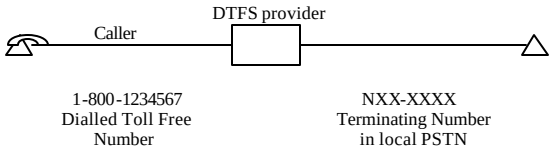
4.79 The Vertical Services Codes - *XX(X) – are discussed in paragraphs 4.34 – 4.39 of this Document. As a matter for further consultation on numbering, the Office will propose a study to determine the potential need and use of additional abbreviated dialling resources, e.g., #XX, within Jamaica. Such resources may not be as valuable in Jamaica with full availability of the 1XX resources. However, if as a result of the study an implementation of such codes is agreed, it is proposed that, from the very start, the Office centrally administers the use and assignment of those new resources. This does not preclude the ability to allocate a block of codes for Service Provider-Specific use.

Toll Free (Called party pays) Numbers

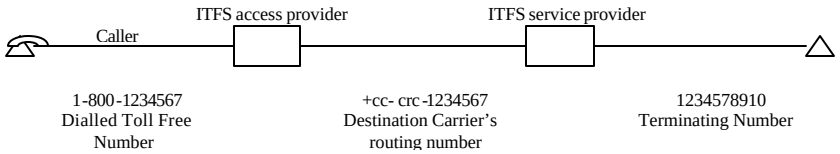
4.80 Since its introduction in the USA in 1967 by American Telephone & Telegraph (AT&T), Toll Free service (also known as '800' and 'freephone' service) has had phenomenal growth in demand - with varied implementations in different countries/regions - worldwide. Toll Free service provides the subscriber with the ability to allow callers to dial a number where the cost is free to the calling party.

4.81 There are three types of Toll Free service:

1) *Domestic Toll Free Service* is provided exclusively within the country of origin, and is available in many countries, although the implementation varies widely from country to country in terms of number format, charges, technical solutions, etc. The basic routing is illustrated below.



2) International Toll Free Service utilizes the national numbering plan in one service territory – the location of the caller – to make a number available to the customer subscribing to the service in another service territory. The customer does not normally have a choice of numbers in the originating network. A typical implementation is illustrated below:



3) *Universal International Freephone Number Service (UIFN),* as in the case of ITFS, connects caller and subscriber, toll free to the caller, between two service territories/countries. A major difference is that the UIFN subscriber is assigned a number that is unique and does not conform to a national numbering plan throughout the world. The number format is: +800 XXXX XXXX. In dialling a UIFN number, the '800' country code is preceded by the international access code applicable in the originating country (011 in the NANPA), and followed by an 8-digit Global Subscriber Number.

4.82 The International Telecommunication Union's Telecommunication Standardization Bureau is the registrar of UIFN numbers in accordandance with ITU-T Recommendations E.169 and E.152. National Numbering Administrations may choose to coordinate applications for UIFNs from or for qualifying international telecommunications operating entities. Arrangement to provide ITFS and UIFN services are made between connecting international carriers. Both services support portability, that is, a subscriber can change his service provider while retaining his Toll Free number.

4.83 '800' toll free service with number portability has been implemented jointly in the Canadian and U.S. domestic networks. Except for a limited number of purposes, it is not possible to call - free of any charge- 800/888/877/866 numbers in the rest of the NANP, from Jamaica. Currently there is an interim measure in effect where 880, 881 and 882 are used to contact '800' Service customers elsewhere in the NANP. However, the INC has determined that the use of 880/881/882 for this purpose will cease in 2003. Cable & Wireless Jamaica provides a Domestic Toll Free Service using 888 numbers. The company also provides International Toll Free service with 800, 888 and 877 numbers between Jamaica and the USA, Canada, the English-Speaking Caribbean and the United Kingdom.

4.84 The Office of Utilities Regulation is mandated under the telecommunications Act 2000, to…"promote fair and open competition". Consequently it must ensure that new network operators and service providers to the telecoms market have fair and equitable access to Toll Free number (TFN) resources for the provision of Toll Free services on a competitively neutral basis.

4.85 The Office therefore wishes to consult on what technically and economically feasible approach should be adopted to ensure the desired availability of Toll Free numbers to service providers and subscribers which is a further step in the development of full competition. The primary goals of any proposed scheme should allow for:

a. All Toll Free numbers to be available to all service providers entitled to allocation of the resources.

b. Service providers to be able to verify the status (assigned, reserved, available, etc.) of any Toll Free number at any time.

c. All Toll Free numbers to be available to customers on a non-discriminatory basis and applications for service to be honoured on a first-come-first-served basis.

d. Customers to be offered a measure of choice for newly assigned numbers, for instance, where commercially attractive numbers (a.k.a. vanity numbers) are desired.

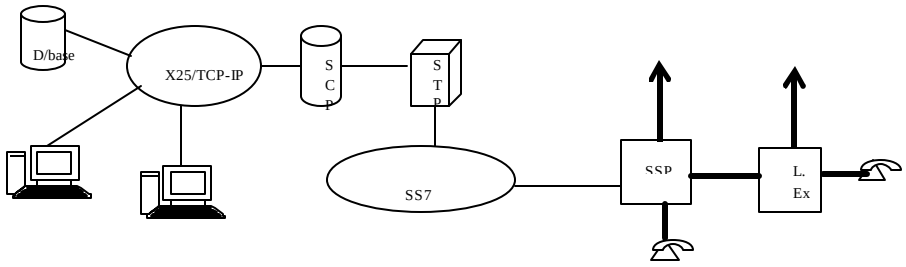
e. Toll Free numbers to be portable between operators, allowing customers to change service providers while retaining their numbers, and thereby, make the service truly competitive.

f. An individual Toll Free number to be assigned to only one customer

4.86 Importantly, Toll Free numbers are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered or leased by the assignee for a fee or other consideration.

4.87 Implementation of Toll Free service in the Jamaican network, as in the North American environment, uses SS7 functionalities (see section 4.54) for TFN translations and routing determination. The SCP database contains customer records - identified by the Toll Free Numbers - that can show call handling instructions and options selected by the customer. When a Toll Free number is dialed, the SSP associated with the originating office contacts the appropriate SCP to obtain call-processing details. In this process, the Toll Free number may be translated into an ordinary telephone number for call termination in the local network, for domestic the service, or a special routing number which is sent to the International network for final routing via the appropriate carrier, for International Outbound service.

4.88 The SCP functionality is the key to Toll Free service portability. Since SS7 signalling is a fundamental interconnection requirement in the Jamaican network, each network operator is expected to own at least one pair of SCPs. All SCP databases associated with Toll Free service would contain identical information. There would have to be, therefore, a central registry from which operators would obtain allocations of numbers. In the USA/Canada, for example, the process of Toll Free number allocation is managed with the use of an operations and administrative support system, called the 800 Service Management System (SMS/800), which is owned and operated by the Bell Operating Companies[2]. Service Providers use the SMS/800 to verify the availability of Toll Free numbers, reserve them, and create or update customer records and call routing information associated with reserved or assigned Toll Free numbers. The SMS/800 downloads the appropriate information to the SCPs. User-access to the SMS/800 is via dedicated line, dial-up or Internet connections. There are FCC-established rates and charges associated with the use of the SMS/800.



Administration System | SS7 Network | Switching Network

4.89 An SMS/800-type Administration system, as modelled in the diagram above, should be adopted for the local industry. Of course the Office recognizes that such a decision should be balanced against the likely costs and the potential demand for Toll Free numbers in Jamaica. The ownership of, and operational responsibility

[2] Bell Operating Companies Tariff F.C.C. No1 1st Revised Page 18

for, such a system, and the time frame for its implementation, along with applicable tariffs, are key issues to be addressed.

4.83 The Office invites comments on the issues addressed in chapter 4, in addition to responses to the questions below.

Question 1: ***What are your views as to the potential usefulness of the resources (other than CO and Signalling Codes) discussed/recommended in this chapter?***

Question 2: ***Do you agree to an expanded use of 1XX short codes in the fixed network and the use of the proposed 1XX(#) dialling format?***

Question 3: ***Do you agree that N11 and N00 codes should continue to have "Reserved" status? What in your view would be the most appropriate use of these codes?***

Question 4: ***Should the limited supply of abbreviated dialling resources be apportioned to the three general categories of use - Public Interest, Common, and Service Provider-Specific? If so, by what ratio? If not, why?***

Question 5: ***What are your views in relation to the future demand for each the three types of codes.***

Question 6: ***What are your views in relation to the introduction of Toll Free Service portability? Comment on the technical and commercial implications.***

Question 7: ***Do you think that the use of Vertical Services codes should be standardized in accordance with the NANP assignments shown in Annex C?***

CHAPTER 5: THE NATIONAL NUMBERING PLAN - THE OFFICE'S PROPOSALS

Introduction

5.1 The Analysis, in Chapter 3, of the current status of Numbering within the '876' NPA, showed that geographic and non-geographic services share numbering ranges and consequently, a number does not always readily identify the service type and give the approximate cost of a connecting call. The analysis also revealed the need for proper husbandry and conservation of the numbering resources with the reservation of entire ranges for future use. It is therefore the responsibility of the Office to ensure that, as far as possible, without undue costs to the industry, numbers are allocated in a way that will give broad service/cost indications to customers when they are placing a call and thereby too, promote effective competition, and safeguard supplies to meet future demands This chapter sets out the Office's proposals as to how the numbering scheme might be organized. Every attempt is made not to be too fully prescriptive at this early stage of a growing and changing telecoms market. Therefore, only those key aspects that need to be determined at this stage are being addressed. They include:

- The allocation of numbers for competitive wireless services
- The allocation of numbers for competitive geographic services
- The allocation of Numbers for long term growth
- Future arrangements for Access codes (currently, 3-digit short codes allow customers to reach common services, e.g. 119 – police, or exclusive access to special features and facilities offered by their service providers)
- Possible new number rangers for Special Services
- Proposals for rules to establish requirements and conditions for the administration and use of telecommunications numbers for the provision of telecommunications services.

These are in addition to proposals/recommendations put forward in the earlier chapters.

The Office seeks the view of the sector on both the general approach towards establishing the National Numbering Plan and the specific elements detailed below.

Allocation criteria

5.2 The reorganized Jamaican national Numbering Plan should therefore meet, at a minimum, the following set of criteria:

- *Provide customers with a broad indication of service type and cost*

  The amount of easily recognizable and useful information that a telephone

number can convey is very limited. Currently, the cost of domestic geographic service is driven by the time of the call as well as whether it is intra-parish or inter-parish, with two basic rates. It is not known what the tariff structures for new service providers will be. The customary ease with which customers could associate numbers with geographic locations (county, parish, town) less than a decade ago, no longer obtains because of the subsequent pattern of number assignment. At this stage, it would be inefficient and impractical to assign numbers in a manner so as to embed locality information in a way that it would be easily recognizable to customers. Since price competition is encouraged, easy identification of competing service providers by their numbers would seem a logical and desirable approach in ensuring that customers benefit. However, the Office, as do many regulatory authorities, will avoid operator branding of numbers because of its anti-competitive potentials. Nevertheless, the allocations proposed by the Office give broad indications of service type and approximations of cost (mobile, geographic or premium-rate service type or tariffs will be readily identifiable from numbers) without impeding competition. This, of course, may involve the migration of certain premium services that now use codes in the proposed Geographic category, to the proposed Special Service group.

? *Cost effective and practical for industry implementation*

Inevitably, there will be some CO Code reallocations within categories of codes and which might require a number of subscriber transfers. However, the proposed approach to such changes is evolutionary rather than revolutionary (see section 5.8). It is the view of the Office that most recommended changes are technically viable – requiring no special adaptation of switching and support systems. Cost to operators and to customers in general should to be minimal.

? *Support effective competition*

The promotion of fair and open competition requires that equal and necessary levels and quantities of numbering resources be made available to competing services providers. This means, firstly, that competing providers should be able to obtain comparable quantities and types of numbering space, e.g., CO Codes versus blocks of line numbers within a shared code. Secondly, that service providers should be able obtain the level, type, and quantity of numbers necessary to offer services that might be unique to them. The proposed reallocation of resources limits, if not eliminates, any undue competitive advantage, such as could flow from service provider branding, resulting from pre-existing number allocations. The reorganization/reallocation of the Jamaican NNP ensures that there are adequate resources available to meets these demands

? *Provide flexibility for undefined future needs*

It is important to ensure that there are always adequate resources to meet the uniform and unique needs of service providers for growth and the introduction of new services while making sure the efficient use of a finite supply. These apparently conflicting tasks are sometimes difficult to coordinate, but the Office is confident that the new National Numbering Plan will meet both requirements, i.e., resource availability and efficiency. The current quantity of numbering resources available in Jamaica, when compared to the Jamaican population and a reasonable projection of future services are anticipated by the experts to be more than adequate for the foreseeable future. This, along with the reservation of numbering space for future demands, make the ability to achieve both availability and efficiency an easier reality.

Allocation Scheme

5.3 The Office proposes that the Jamaican numbering resources should be allocated in a revised plan as follows:

NUMBER RANGE	SERVICE/ALLOCATION	COMMENTS
1XX / N11	Access Codes / Reserved	Use to be determined through further consultation
2XX	Reserved for growth	
3XX	Competitive Wireless	
4XX	Reserved for growth	
50X-54X	Reserved for growth	
55X-59X	Competitive Geographic	
6XX	Competitive Geographic	
70X-76X	Competitive Geographic	
77X-79X	Competitive Wireless	Later migration to Competitive Geographic
8XX	Competitive Wireless	
9XX	Competitive Geographic	
200,300…900	Short Codes for Special Services (Exceptions may apply, e.g., 977, 988 – CO Codes for C&WJ's)	Easily Recognizable Numbers. Specific uses to be determined through further consultation
222,333…999		
233,244, …977,988		

The following basic principles should govern the use of numbers in each category:

Geographic

- ✍ To be used for the generality of services that are delivered to a fixed geographic destination and which are charged at a "standard tariff" to the caller.
- ✍ Calls may route to other services provided that the caller pays the "standard tariff" for the geographic destination.
- ✍ Standard number length of seven dialed digits, excluding any prefix
- ✍ Normal allocation will be in blocks of 10,000 numbers

Wireless

- ✍ Service is geographically independent (service not delivered to a fixed geographic location. Currently limited to cellular mobile services.)
- ✍ Calls are routed to the service providing operator
- ✍ Standard number length of seven dialed digits excluding any prefix
- ✍ Normal allocation will be in blocks of 10,000 numbers

Special Services (Using Easily Recognizable Numbers)

- ✍ Special Services (SP) number is geographically neutral (may or may not identify a fixed geographic location.
- ✍ Calls are routed only to the service specified for the number
- ✍ Services has high social value (e.g., information, entertainment) and is frequently used
- ✍ Service is charged at a special rate
- ✍ Service is quickly accessible, via the SP NXX followed by 4 digits
- ✍ Normal allocation will be in blocks of 10,000 numbers
- ✍ The Office should consult further on the services to be served from this category or other ways that special services numbers can be used

Access Codes (Short Codes)

- ✍ The Office proposes the retention of the 11X access codes in their current application and that such uses have a common meaning for all operators, unless otherwise dictated by future industry developments. This proposal is driven by the fact these codes are generally well known and have a traditional acceptance in Jamaica, and the Office knows of no overriding purpose to change the status quo at this time.

? Current 11X uses are:

110 Emergency services
111 Unassigned
112 To be recovered
113 International Service
114 Directory Enquiry
115 Repair Service
116 Special events (e.g. meteorological bulletins)

117 Time
118 Local office Access (repair crew)
119 Police

? The Office favours the use of the 1XX(#) dialling format to make the 1XX short codes available for assignment in the existing fixed line network, concurrent with the standard use of the 1+ toll prefix. This option would provide a more flexible approach to meet the current 'shortage' of access codes. With the sole exception of public emergency services currently reached by '110 and 119 (should the emergency agencies assume full control of access), the Office believes, given the scarcity of these resources, that 1XX codes should be made available only to those who operate public telecommunications networks.

Establishment of Rate Centres

5.4 New fixed services providers are not restricted to the two-level (inter-parish and intra-parish) rating scheme applied by Cable & Wireless Jamaica and may opt for a more comprehensive tariff arrangement where rates and costs for services are based on distance sensitive factors. It is therefore considered prudent to put in place, at this time, a rate centre scheme that would facilitate easy adaptation to the afore-mentioned prospective rating environment.

5.5 A Rate Centre is essentially the approximate geographic centre of a defined rate area. The trigonometric coordinates of the rate centre are used to determine distance dependent rates for PSTN calls. A rate centre is usually identified synonymously with the rate area. The Office proposes the establishment of standard rate areas on the basis of the existing parish division with the parish names as the rate centre names. The parishes of Kingston and St. Andrew would represent, conjointly, a single rate area designated Kingston.

5.6 It will be necessary to determine the geographic coordinates of the parish centre for use in distance calculations. The latitudinal and longitudinal coordinates are converted into Vertical and Horizontal (V&H) coordinates using a complex algorithm that projects the curvature of the earth onto a flat plane. The V&H coordinates were developed by the telecommunications industry identify locations and can therefore be used to determine relative distances between network elements, e.g. switches and points of interconnection, and between "rate centres" (the "centre" of rate area). Distances between sites are determined by calculating the square root of the sum of the squares on the differences in the vertical and horizontal coordinates divided by ten:

$$\text{Distance in miles} = \sqrt{((V_1 - V_2)^2 + (H_1 - H_2)^2)/\ 10}$$

The existing trigonometric stations (geographic points of reference for which official coordinates measurements are kept by the Land Survey Department) across

Jamaica do not coincide with the geographic centres of the parishes in which they are located. Operator may seek the assistance of the Land Survey Department for to obtain requisite geographic coordinate measurements.

5.7 Ordinarily, a CO Code may be associated with only one rate centre. In North America, this principle has resulted in inefficient use of numbering resources, limited the use of number block pooling as code relief strategy, and accelerated NPA exhaust. A number utilization survey will be done to determine the potential for this problem in the 876 NPA if the proposed rate centre scheme is implemented. The solution being applied by regulatory authorities in the USA, to conserve NXX's, is the consolidation of several rate centres. For example, in the '208' area code, the number of rate centres will be reduced from thirty-nine to eight, effective July 15, 2002; this will significantly delay the assignment of new NPA codes to the State of Idaho.

Change implications

5.8 The proposed reallocations mean that codes currently assigned to some services will need to change, but this should to be done on a phased basis, with the minimum of disruption for customers. The potential changes would affect only numbers currently allocated to the incumbent carrier, Cable & Wireless Jamaica. The proposed CO Code matrix in Annex B highlights the proposed code *transfers* and number changes.

5.9 Over the years Cable & Wireless Jamaica, from time to time, and on a relatively small scale, has made number changes to facilitate the development of its network. From all appearances, customers have adapted quickly to these changes. Importantly, telephone number changes do not violate the existing terms and conditions governing the provision of service to the carrier's residential and business customers. The relevant section of those terms and condition states:

> *"Customers shall have no proprietary rights in telephone numbers…assigned to them by the company. The company may make reasonable changes to such numbers…and to Central Office assignments provided that it shall give reasonable notice of such changes to customers"*

5.10 It is therefore reasonable to assume that code and number changes on larger scales, appropriately planned and managed, will not be onerous to the general public. Nevertheless, the Office is mindful that there are potential cost implications for number changes; for example, that business customers may have to make changes to stationery, signs and some equipment.

Transition Plan

5.11 The office proposes the following approach to code/number migration:

- ✍ Immediate discontinuation of number assignments in number ranges marked for transfer. All new resource assignments to be made in the ranges specified for the respective service to be provided with the resource. Numbers not in their designated categories, to be frozen for reclamation and reallocation.

- ✍ No number changes to be made before January 1, 2004 to allow the industry time plan for number changes

- ✍ Customers to be affected by number changes to be given at least one year's notice This is especially necessary for business customers.

- ✍ Affected customers to be advised of the new numbers at the beginning of the notification period

- ✍ Permissive dialling of old and new numbers for at least 90 days

- ✍ Old numbers to be aged for 90 days during which time "changed number" announcement should be applied, where practicable, in the case of business numbers.

5.12 The benefits of this plan will not be realized unless all services comply with the above numbering arrangements. Steps may be needed to ensure that where current service allocations remain outside the proposed ranges, such services migrate to codes consistent with the new plan after a reasonable transition period.

5.13 The Office would welcome comments on the ideas set out in chapter 5 and other views and proposals on a numbering scheme for Jamaica. Below are specific questions to which answers are sought.

Question 1: ***What are your views on the relative importance of the evaluation criteria set out at the beginning of this chapter? How does the proposed numbering plan measure up to these criteria?***

Question 2: ***What are your views as to the appropriateness of the proposed resource allocation categories and the corresponding levels of number allocations?***

Question 3: ***What do you envisage as important implications (e.g. cost, administrative, technical, service) of the proposed code changes.***

Question 4: ***Do you think that people adapt relatively quickly to code and number changers?***

Question 5: ***Do you agree with the proposed basic principles (paragraph 5.3) to governing the use of numbers in the respective categories? What changes,***

if any, would you recommend that would ensure that numbers are efficiently used and that hoarding of resources is avoided?

Question 6: ***What are your views in relation to the appropriateness/technical implications of the proposed 1XX(#) dialling arrangement for the use of 1XX access codes in the fixed network?***

Question 7: ***What are your view in relation to the establishment of rate centres on the basis of existing parish divisions.?***

Question 8: ***Do you agree with the scope, timing and method of migration of services to new number ranges? If not, what are your recommendations as to migration strategies that could be followed?***

CHAPTER 6: PROPOSED RULE MAKING FOR THE ADMINISTRATION OF THE NATIONAL NUMBERING PLAN (NNP)

Introduction

6.1 The Telecommunications Act 2000 (Section 8, paragraph 2) states that the Office "… may make rules pursuant to that [numbering] plan **regarding the assignment and use of numbers** by carriers and service providers." The proposals set out here are with regard to Rules that might be required at the present time. As the NNP and its administration and management evolve, there certainly will be a need for additional or modified Rules. The rules proposed here relate only to the NNP Administration function and the reorganization/reallocation of the NNP.

6.2 Jamaica is served by the North American Numbering Plan (NANP), the integrated numbering plan for 18 North American and Caribbean countries. There are numerous "rules" and procedures instituted by open and appointed NANP fora, e.g., the Industry Numbering Committee (INC), and the North American Numbering Council (NANC) both of whose members come from the entire North American telecommunications community. As a participant in the NANP, Jamaica has an inherent responsibility to conform to the rules agreed to by these representative fora. Nevertheless, much latitude is allowed on the domestic implementation of these rules, to accommodate the national regulatory realities of each NANP-served country. However, if additional NANP resources, e.g., additional NPA codes, are requested, there will be questions regarding the efficient use of the existing resources. The Office therefore, in developing Jamaican-specific Rules regarding its NNP resources that are an integral part of the larger NANP, should consider the implications of the INC and NANC rules and procedures as well as developments in the wider international telecoms environment.

Potential rules required to effect a environment of equity and order

✍ **Rules governing the roles of the Office, industry entities and users, in the use, administration and management of the NNP resources.**

6.3 Described below, are the basic roles and responsibilities of the National Numbering Plan (NNP) Administrator, the Resource Applicant, the Resource Assignee, and the End User with regard to the assignment and use of numbering resources. These should provide a basis for the development of relevant rules. Specific tasks with regard to each resource administered by the NNP Administrator are contained in the Assignment Guidelines for the respective resource.

The Office

6.4 The Office will be responsible for the assignment and management of the numbering and addressing resources of the NNP. A national regulatory authority can either perform these functions itself or delegate them to another entity. If the latter occurs, it does not limit the responsibilities of the authority with regard to these functions. A Regulator can delegate its authority to perform these functions on a day-to-day basis, but it cannot delegate its oversight responsibilities to ensure that those functions are performed in an appropriate manner. Wherever the administrative function resides, the general responsibility of the NNP Administrator is to assign, reserve, reclaim, and manage NNP resources in a fair, impartial, and equitable manner, in conformance with the appropriate resource Assignment Guidelines.

The Office will be responsible for:

- ? Administering the numbering resources identified in chapter 4
- ? Assigning and administering resources under its jurisdiction in an efficient, effective, fair and non-discriminatory manner, in conformance with resource Assignment Guidelines
- ? Reviewing requests for all numbering resources to implement new applications and services, and making assignments in accordance with resource assignment guidelines.
- ? Liaise with all appropriate and related domestic and international entities,
- ? Ensuring that adequate NNP resources are always available for legitimate assignment and use
- ? Managing the resource conservation and exhaust programs
- ? Ensuring there are complete and clear resource guidelines in place to address the needs of the entire telecommunications sector and the domestic regulatory environment.

Resource Applicants

6.5 The first responsibility of an NNP Resource Applicant is to provide, complete, accurate, and truthful information, as required by the appropriate resource Assignment Guidelines, when applying for an NNP Resource. Inaccurate and/or incomplete information can delay, or even deny, an assignment. The filing of untrue information can result in the reclamation of an assignment resource at a later date.

6.6 An applicant should determine what the requirements are for the application and assignment of a resource by careful and complete review of the appropriate Assignment Guidelines. The applicant should acquire the most recent iteration of the Guidelines from the Office in advance of submitting an application. Once this review is completed, the applicant should complete the appropriate application

forms, usually annexed to the Assignment Guidelines, and submit it to the Office in the manner prescribed in the Assignment Guidelines.

6.7 If the resource applicant believes the actions of the Office with regard to its application, to be incorrect or otherwise inappropriate (e.g., application was denied), it is the responsibility of the applicant to follow the Appeals Process, as defined in the Assignment Guidelines.

Resource Assignees

6.8 The primary responsibility of the NNP resource assignees is to utilize the assigned resources in conformance with the Assignment Guidelines. In this context, the primary interest is that resources are used in an efficient and effective manner. Lack of strict adherence to the tenets of the specific Assignment Guidelines can result in the reclamation of assigned resources by the Office. The reclamation of resources already in use can be particularly onerous and disruptive to the business interest of a service provider as well as to its subscribers.

6.9 One critically significant responsibility of a resource assignee is to understand and adhere to the legal requirements associated with the assignment and use of an NNP resource. One significant legal requirement is that the assignment of a resource does not imply ownership of the resource – the collective telecommunications sector owns these resources. The specific implication of this tenet is that resources cannot be sold or transferred except as explicitly stated in the appropriate Assignment Guidelines, e.g., as part of a merger or acquisition.

6.10 If the resource assignee believes the actions of the Office, with regard to its assigned resources, to be incorrect or inappropriate (e.g., application was denied) it is the responsibility of the applicant to follow the Appeals Process, as defined in the Assignment Guidelines.

6.11 A resource assignee has the responsibility to return, to the Office, any resource no longer in use or no longer in use in specific conformance to the Assignment Guidelines. The performance of this responsibility, in the appropriate manner, enables all resources to be utilized in the most efficient manner and to ensure resource availability to other telecommunications entities.

End Users

6.12 The responsibilities of end users, typically service subscribers, are limited. The primary responsibility, once again has to do with resource utilization and conservation. Most countries have specific legal requirements regarding the use of NNP resources, e.g., they must be used only within the geographic boundaries of the domestic NNP. It is the end users' responsibility to ensure that they use their assigned NNP resources in conformance with domestic regulations. All resource Assignment Guidelines should reflect this responsibility. However, experience

teaches that most end users are not, and cannot be, aware of their responsibilities in this regard. It is, therefore, incumbent upon the service providers to inform end users of identified misuses of NANP resources and to assist their subscribers to transition to conformance. If a specific end user refuses to be in conformance, it must be determined what the legal remedy is within Jamaican law. For example, is the service provider required or authorized to disconnect the service of non-conforming end users or must such action be reviewed and mandated by the Office or Ministry? This issue should be dealt with in further consultation.

6.13 Additionally, and for large end users in particular (e.g., PBX operators), there is a responsibility to utilize resources in an efficient and effective manner. In other jurisdictions, PBX operators have been known to require and receive an inordinate block of consecutive numbers in order to allow for any foreseeable future need. Although growth in numbers, in a consecutive manner, should be recognized, it should be implemented in a reasonable manner. For example, an entire central office code should not be assigned to a small PBX operator without compelling evidence of future growth to fill this resource. It is a fact that many numbering resources worldwide are exhausted prematurely without review and consideration of this practice. The foregoing example may not have a parallel in Jamaica, but, in principle, is nonetheless instructive to the local industry.

6.14 Similarly to the Resource Applicants and Resource Assignees, large end users should make an effort to participate in any industry telecommunications fora established by the Office. In several countries, large companies and industry associations actively participate in such fora in order to ensure the protection of their rights and needs with regard to NNP resources. They also bring the end user perspective to such fora. Service providers and network operators often do not represent the needs of their subscribers.

✍ **Rules containing guidelines and procedures for the assignment and use of NNP resources**

6.15 These rules should embody the guiding principles and criteria for the assignment and reservation of each NNP resource, and criteria and authority for the reclamation of assigned numbering resources. The rules should also cover the audit and appeal processes.

6.16 Proposed Assignment Guidelines and procedures for the assignment of Central Office Codes, International Mobile Station Identities (IMSI) and Signalling Area Network Codes/International Signalling Point Codes (SANC/ISPC) are presented in Annex B. Industry participants are required to review and comment on these documents for the proposed industry adoption.

6.17 The Office proposes that once the final versions of these Jamaican guidelines are ready for publication, they should be published, in total, as an OUR Ruling. The Office recommends also that the actual Guidelines documents be appended to the

official Ruling in a manner that allows their periodic revision without necessitating the revision and publication of the entire Ruling. Recommendations for modification to the guideline may be made by the Office or any officially recognized industry participant.

6.18 The purpose of the audit process should be to:

- ? monitor the CO Code assignment rate to ensure effective and efficient use of numbering resources
- ? provide assistance to code holder, and suggest alternatives when possible, that will optimize numbering resource utilization
- ? forecast service providers requirement for CO codes
- ? provide data for NANPA's 'Central Office Code Utilization Survey' studies (Any information released to NANPA or to the industry should be released on an aggregated or summary basis and not identify any particular operator).

6.19 The audit procedure should require each code holder to submit to the Office, biannual (at the minimum) a utilization report of their current inventory of numbers reports which specify for each allocation:

- ? The current use of the resource
- ? % assigned to end users or which for other reason are unavailable for further assignment – the reasons for unavailability should be specified.
- ? Assignment of blocks of numbers for purposes other than end use
- ? Forecast of demand within significant ranges specified by the Office of Utilities Regulation
- ? Where numbering space has been reserved, the justification for continuing reservation.
- ? Any other information required by the Office of Utilities Regulation (the collection or analysis of such information should not place undue burden on the service provider)

✍ **Rules for industry notification and follow up regarding the activation of new number ranges**

6.20 Paragraphs 7.11– 7.15 set out the Office's understanding regarding notification of number changes within and external to the NANP. Currently C&WJ, as the sole International Carrier, is continuing their undertaking to notify connecting carriers, internationally, of the activation of new CO codes within Jamaica. However, a change in this role can be expected when other international carriers enter the Jamaican market. Notification within Jamaica should be the responsibility of the National Numbering Plan Administrator.

6.21 The rules should:

- ? identify who has responsibility for initial industry notification

- ? state the scope of notification, i.e., who is to be notified and information to be provided
- ? determine the notification methodology (standard form letter; e-mail; fax; industry database input.)
- ? ensure that notification is effected in a timely manner (fixed timeframe)
- ? include arrangements for the code assignee and the code administrator to receive timely confirmation of notification (hardcopies of notices; fixed timeframes)
- ? identify responsibility for follow-up; (international carrier; code holder; office)

✍ Rules for the classification of the use of numbers

6.22 A primary responsibility of the NNP resource assignees is to utilize the assigned resources in conformance with the Assignment Guidelines, in an efficient and effective manner. The Office proposes that for administrative purposes, all numbers allotted to service providers be classified in one of the following defined number use categories which will also provide a basis for reporting on the resources:

a) *Administrative numbers*
Numbers used by telecommunications carriers to perform internal administrative or operational functions necessary to maintain reasonable quality of service standards.

b) *Aging numbers*
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 should be aged for no less than 30 days and no more than 90 days. Numbers previously assigned to business customers should be aged for no less than 90 days and no more than 360 days.

c) *Assigned numbers*
Numbers working in the Public Switched Telephone Network under an agreement such as a contract for service 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 seven days should not be classified as assigned numbers.

d) *Available numbers*
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.

e) *Intermediate numbers*
Numbers that are made available for use by another telecommunications carrier or non-carrier entity for the purpose of providing telecommunications service to an end user or customer. (Numbers ported for the purpose of transferring an established customer's service to another service provider should not be classified as intermediate numbers).

f) *Reserved numbers*
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 45 days should not be classified as reserved numbers. Restriction should impose the quantity of numbers a carrier may hold in reserve at any

6.23 The Office would welcome comments on the individual proposals for rule making and in particular on the proposal to publish the Jamaican resource assignment guidelines as an OUR ruling. The Office also invites responses to the following questions:

Question 1: ***Is the scope of coverage of the rules adequate to ensure fairness and efficiency in the administration and use of numbering resources, and if not, what enhancements, and other rules, might apply?***

Question 2: ***Is the proposed classification of the use of numbers satisfactory? What amendments, if any, would you propose?***

CHAPTER 7: TRAFFIC ROUTING ADMINISTRATION AND INDUSTRY NOTIFICATION

Traffic Routing Administration (TRA) Processes

7.1 Traffic Routing Administration (TRA) supports the telecommunications industry by providing data services and products for the completion of Public Switched Telephone Network (PSTN) calls and the proper rating of these calls. The TRA function provides processes for the inter-company exchange of pertinent rating and routing data. The TRA data is intended to be NANP-wide in its scope. The TRA function resides with Telcordia Technologies Inc. TRA gathers, aggregates, and disseminates the collected data in the form of products that are offered to the telecommunications industry on a fee or license-based arrangement.

7.2 The data collection process employed by the TRA permits local service providers (fixed local carriers, mobile carriers, PCS providers, paging companies, etc.), or their agents, the ability to report data on Central Office (CO) Codes (or NXXs), switch-to-switch homing arrangements and host/remote relationships, switch services, operator-to-operator routing, and other related routing data. It also provides an effective means to report data used in rating a call, although actual rates are not provided.

7.3 The collection, aggregation, and dissemination of data are accomplished for two separate network functions: routing and rating. Data related to the routing of PSTN calls are critical to all network operators within the NANP-served area. Data related to the rating of PSTN calls are pertinent only to those carriers handling calls based on the same domestic rating structure. It is recommended that Jamaica continues to actively participate in the collection, aggregation, and dissemination of the data related to the successful routing of calls within the NANP-served area. At the very least, the availability of CO Code activation information is critical to all carriers within Jamaica and in all other NANP-served countries. However, it is not deemed advantageous to Jamaican carriers or carriers based in other NANP-served countries to have Jamaica participate in the rating functions of the TRA – rating between Jamaica and other NANP-served countries is based on international rating arrangements; not the same domestic rating structure. However, consideration will be given to limited application of the rating functionalities of the TRA for local purposes. It was generally agreed among the Office and the existing carriers, in a recent meeting, that although a single rate centre designation would suffice for the present TRA requirements - since the information was not applicable to the existent international rating regime - current trends in the wider market, in terms of new and innovative service offerings and rating/billing schemes, could eventually apply in the local industry and spawn requirements for multiple rate centres. It was therefore considered prudent to put in place at this time, a rate centre scheme that would make easy Jamaica's adaptation to the afore-mentioned prospective rating environment.

7.4 The BRADS (Business Routing Administration Database System) process is how the routing data is input to the TRA function. The primary dissemination media for this data is the Local Exchange Routing Guide (LERG) and, to a lesser degree, the Terminating Point Master (TPM). Of a lesser, but often related, interest are the

NPA-NXX Activity Guide (NNAG), the NPA-NXX Active Code List (NNACL), Emergency Notifications (ENs), and the Special NPA Exchange List (SNEL).

7.5 The LERG is the comprehensive NANP-wide routing database. The data supports the current local exchange network configuration within the NANP and identifies reported planned changes in the network. The LERG is designed to be used for (1) the routing of calls by inter-exchange carriers, (2) providing information on the local environment for the numerous carriers involved in the local arena, and (3) any other company needing information about the network, numbering, and other data in the LERG. The LERG includes the following, not all of which is appropriate to or usable in Jamaica:

- Local Access and Transport Area assignments
- Operating Company Numbers (OCN) and Routing Contacts by OCN
- Numbering Plan Area (NPA) assignments
- Destination Code (NPA/NXX) assignments, including switching entity and Rate Centre; also including Thousands Block Pooling assignments
- Switching Entity detail
- Rate Centres and associated Localities
- Tandem Homing Arrangements
- Operator Service Access tandem Codes
- Location Routing Numbers

7.6 The TPM supports various systems used in rating and billing and is a source for NPA/NXX-related data (type of NXX, e.g., wireless), time zone, daylight savings observance, Revenue Accounting Office (RAO), Rate Centre Vertical & Horizontal (V&H) coordinates, "place name" associated with the NNX, and other related data. The data also include non-dialable toll points, information on Special Calling Card codes, Operating Company Numbers (OCNs), and NPA/NNXs with minor V&H coordinates. Actual rates are NOT included.

7.7 With Jamaica's participation in the routing function of the TRA process, all carriers in NANP-served countries will have ready access to CO Code activities within Jamaica's NPA code. The inclusion of this Jamaican data will enable NANP-based carriers to properly route calls to Jamaica. Without Jamaica's active and timely participation, it is probable that calls to newly activated CO Codes will not be completed at the time of code implementation.

Responsibility for TRA data input

7.8 There are two basic stages in the data entry process to input routing and rating (R&R) data into the TRA databases. The first input of data (from the "Central Office Code Assignment Request" or "Part 1" Forms) is done concurrently with the assignment of a central office code, and is done by the CO Code Administrator. This initial entry is made to the Assigned Code record. It marks a code for eventual activation and permits the second data entry stage, which provides information (from the "Routing and Rating Information" or "Part 2" Forms) supporting the code assignment for input into the primary routing and rating databases. The second set of data is entered either by the Code Holder or by a contracted or otherwise authorized third party company who has TRA authority to make such entries.

7.9 The Office is the CO Code Administrator for Jamaica, and as such, has assumed responsibility for the initial entry of data. The remaining decision is how the rating and routing data will be input to the TRA for code activation. In the United States, the NANP Administrator (and CO Code Administrator, NeuStar, Inc.) does not input R&R data for carriers to which CO codes are assigned. The latter make their own arrangements (often contractual) to create and update their data. In Canada, the large carriers make arrangements for their own data, but the Canadian Numbering Administrator (CNA – SAIC Canada) inputs the data for smaller entities. The remaining alternative, for Jamaica, is that the Office, as the JNA, inputs all data for Jamaica. The Office favours the third alternative which would ensure consistency in the quality and currency of Jamaica's data in the TRA databases. Currently, C&WJ is responsible for inputting R&R data relating to its assigned codes, while the Office acts on behalf of the other existing carriers.

7.10 Companies who directly input their own data must have a formal agreement with the TRA, train its staff, maintain its records in the TRA databases, keep abreast of industry developments that impact the collection and dissemination of rating and routing information and where possible, participate in relevant industry issue resolution processes.

Industry Notification regarding Code changes

7.11 Currently, there is no international procedure/policy governing the notification of network operators worldwide regarding code and number changes. The International Telecommunications Union – Telecoms (ITU-T) Operational Bulletin is an available medium for announcements of number changes. However, many Administrations around the world do not subscribe to the bulletin and it is not clear either that NANPA is informing the ITU of code activations.

7.12 The ITU is acutely aware of the introduction of numerous new numbering resources, domestically and internationally, due to the evolution of competition in the telecommunications industry, and the increasing urgency of the need to ensure that these resources are activated effectively. It has concluded therefore that new methods are required to increase awareness and implementation of these resources.

7.13 The ITU's Study Group 2 is presently studying the issue. The relevant project group is studying potential new awareness and implementation methods and, as a result of the study, will publish these methods in a new E-series recommendation.

7.14 The consensus from the numerous discussions of the study group is that the responsibility to notify network operators, globally, of newly activated codes, lies with the International service providers and not with the domestic regulatory authorities. This was the clear understanding of all the participating network operators that are ITU members. US-based operators reached a similar conclusion during a separate study in the United States.

7.15 It is clear from the foregoing, that the international operators are expected to keep themselves informed of code activations within their respective countries and inform connecting networks worldwide, where required, through their Carrier Relations Centres. The Office takes note of the question as to whether notification is required, for example, where overseas networks only perform 4-digit analysis (CC+NPA) to determine routing to countries served by the NANP.

7.16 The Office invites general comments on Jamaica's participation in the TRA processes. The Office also seeks responses to the following questions:

Question 1: ***Respondents are asked state whether they agree that the should Office assume responsibility for the inputting of all Jamaican Rating and Routing (Part 2) data into the TRA databases, and why.***

Question 2: ***If several entities have data input responsibility, what guarantee should be put in place to ensure that all of Jamaica's data in the TRA databases are satisfactorily maintained?***

Question 3: ***What strategy would you recommend for code activation notification to operators worldwide, where there is more than one international carrier operating in Jamaica?***

CHAPTER 8: FUNDING FOR TRAFFIC ROUTING ADMINISTRATION

8.1 The annual cost of Traffic Routing Administration is shared between the providers (e.g., the Office, C&WJ) and the users of the data in the TRA databases, through a contractual arrangement with Telcordia Technologies Inc., called the Fair Share Plan (FSP).

8.2 Data users share in the TRA costs through license fees for the data they use, while data providers pay the portion of the costs not covered by the license fees. The latter amount is calculated on a cost-per-record basis and charged to each data provider based on the relative number of records it maintains in the database. Details of the Fair Share Plan can be found on Telcordia's website at: http://www.trainfo.com. A data provider may also be a data user.

8.3 A Data provider who does not participate in the Fair Share Plan runs the risk of not having its data distributed in the TRA products. If such a data provider is also a data user, the TRA may not accept new orders for TRA products from it. The end result might well be lower call completion to the data provider's network or the network of the company for whom the provider inputs data to the TRA databases, and increase in complaints concerning call blockages, especially from behind PBXs.

8.4 The Office has entered into a standard FSP agreement with the Traffic Routing Administration and will be billed annually by the TRA for the records it administers in the TRA databases on behalf of local service providers. The billed amount is, in effect, a cost to the companies to which the codes are assigned and should be passed on to them. For example, the cost to be recovered from **company A** would be calculated as follows:

Annual Cost per Record x Total Number of Records for **Company A**

5.7 The Office would welcome views on the principle of the sharing of TRA costs and the final transfer of these costs to the respective code holders.

CHAPTER 9: EXPANSION OF THE NORTH AMERICAN NUMBERING PLAN

9.1 In December 1993, the Industry Numbering Committee (INC) commenced a project to determine a strategy for expanding the capacity of North American Numbering Plan (NANP). Two Key objectives of the NANP expansion plan are: (1) mitigate NPA exhaust; (2) expand the quantity of NPA codes. In its deliberations, the INC considered five alternative plans, testing each against a set of stringent industry-agreed criteria.

9.2 The INC published an interim report in December 1999, and a recommended plan in December 2001. The latter was presented at the meeting of the North American Numbering Council in March 2002. The format of the recommended NANP Expansion Plan provides for 4-digit NPA and CO Codes (replacing the existing 3-digit ones) as follows:

NXX**(X)** + **(X)**NXX + XXX (N = digits 2-9; X = digits 0-9)

? NXX**(X)** - four-digit NPA with **(X)** the additional digit

? **(X)**NXX - four-digit CO Code with **(X)** the additional digit

? XXXX - four-digit line number

The sixth digit takes on the values 2 through 9 to allow for future expansion if required.

This format requires 12-digit local and toll dialling and provides a theoretical capacity of 800 billion numbers – for all practical purposes, an inexhaustible supply. If a unique fourth digit were assigned to the Caribbean, it would provide the region with 80 billion numbers.

9.3 Canada favours an alternative it recommended: the format is a single-digit National Destination Code (NDC) followed by 10-digit national number as shown below:

N + NXX + **X**XX + XXXX - N is the NDC and represents digits 0 through

.

This format allows 10-digit dialling within the NDC and '1+ 11 digits' dialling between NDCs, and provides a theoretical capacity of 64 billion numbers. Each assignee of an NDC would be provided with a stock of 6.4 billion telephone numbers.

9.4 The Office is the sole Caribbean representative on the NANC. It was suggested at the NANC meeting that if Canada is granted a unique NDC, then a similar consideration should be made for the Caribbean as a single entity as follows:

3 + NXX + **X**XX + XXXX for Canada

2 + NXX + **X**XX + XXXX for the Caribbean

9.5 The office seeks comment from all segments of the industry, and other interested parties, on the NANP expansion proposal by the Industry Numbering Committee and in particular the National Destination Code alternative.

ANNEX A: SUMMARY OF QUESTIONS

The Current Status of Numbers (Chapter 3)

The Office invites comments on the current state of numbering and seeks responses to the following questions.

Question 1: What are your views in relation to the future demand for numbering resources?

Question 2: Do you agree with the Office's assessment of the adequacy of existing supply of codes for the foreseeable future?

Question 3: Should the 77X-79X ranges be transferred to the cellular ranges?

Question 4: What specific changes to the existing numbering arrangements would you recommend, and what time frames for their implementation?

Numbering Resources to be Administered by the Office (Chapter 4)

The Office invites comments on the issues addressed in chapter 4, in addition to responses to the questions below.

Question 1: What are your views as to the potential usefulness of the resources (other than CO and Signalling Codes) discussed/recommended in this chapter?

Question 2: Do you agree to an expanded use of 1XX short codes in the fixed network and the use of the proposed 1XX(#) dialling format?

Question 3: Do you agree that N11 and N00 codes should continue to have "Reserved" status? What in your view would be the most appropriate use of these codes?

Question 4: Should the limited supply of abbreviated dialling resources be apportioned to the three general categories of use - Public Interest, Common, and Service Provider-Specific? If so, by what ratio? If not, why?

Question 5: What are your views in relation to the future demand for each the three types of codes.

Question 6: What are your views in relation to the introduction of Toll Free Service portability? Comment on the technical and commercial implications.

Question 7: ***Do you think that the use of Vertical Services codes should be standardized in accordance with the NANP assignments shown in Annex C?***

The National Numbering Plan – The Offices' Proposals (chapter 5)

The Office would welcome comments on the ideas set out in chapter 5 and other views and proposals on a numbering scheme for Jamaica. Below are specific questions to which answers are sought.

Question 1: What are your views on the relative importance of the evaluation criteria set out at the beginning of this chapter? How does the proposed numbering plan measure up to these criteria?

Question 2: What are your views as to the appropriateness of the proposed resource allocation categories and the corresponding levels of number allocations?

Question 3: What do you envisage as important implications (e.g. cost, administrative, technical, service) of the proposed code changes.

Question 4: Do you think that people adapt relatively quickly to code and number changers?

Question 5: Do you agree with the proposed basic principles (paragraph 5.3) to governing the use of numbers in the respective categories? What changes, if any, would you recommend that would ensure that numbers are efficiently used and that hoarding of resources is avoided?

Question 6: What are your views in relation to the appropriateness/technical implications of the proposed 1XX(#) dialling arrangement for the use of 1XX access codes in the fixed network?

Question 7: What are your views in relation to the establishment of rate centres on the basis of existing parish divisions?

Question 8: Do you agree with the scope, timing and method of migration of services to new number ranges? If not, what are your recommendations as to migration strategies that could be followed?

Proposals for Rule Making for the Administration of the NNP (Chapter 6)

The Office would welcome comments on the individual proposals for rule making and in particular on the proposal to publish the Jamaican resource assignment guidelines as an OUR ruling. The Office also invites responses to the following questions:

Question 1: Is the scope of coverage of the rules adequate to ensure fairness and efficiency in the administration and use of numbering resources, and if not, what enhancements, and other rules, might apply?

Question 2: Is the proposed classification of the use of numbers satisfactory? What amendments, if any, would you propose?

Traffic Routing Administration and Industry Notification (chapter 7)

The Office invites general comments on Jamaica's participation in the TRA processes. The Office also seeks responses to the following questions:

Question 1: Respondents are asked state whether they agree that the should Office assume responsibility for the inputting of all Jamaican Rating and Routing (Part 2) data into the TRA databases, and why.

Question 2: If several entities have data input responsibility, what guarantee should be put in place to ensure that all of Jamaica's data in the TRA databases are satisfactorily maintained?

Question 3: What strategy would you recommend for code activation notification to operators worldwide, where there is more than one international carrier operating in Jamaica?

ANNEX B: JAMAICAN NUMBERING RESOURCE GUIDELINES

I. Central Office Code Assignment Guidelines

II. International Mobile Subscriber Identifier Assignment Guidelines

III. Singnalling Area Network Code-International Signalling Point Codes Assignment Guidelines

ANNEX C: 876 NPA AREA CODE PLAN (SERVICE ALLOCATIONS)

NXX	ALLOCATION	0	1	2	3	4	5	6	7	8	9
20	RESERVED FOR GROWTH	Reserved									
21	RESERVED FOR GROWTH	Transfer	Reserved								
22	RESERVED FOR GROWTH			ERC							
23	RESERVED FOR GROWTH			Transfer							
24	RESERVED FOR GROWTH										
25	RESERVED FOR GROWTH										
26	RESERVED FOR GROWTH										
27	RESERVED FOR GROWTH										
28	RESERVED FOR GROWTH										
29	RESERVED FOR GROWTH										
30	CCOMPETITIVE WIRELESS	Reserved									
31	CCOMPETITIVE WIRELESS		Reserved								
32	CCOMPETITIVE WIRELESS										
33	CCOMPETITIVE WIRELESS				ERC						
34	CCOMPETITIVE WIRELESS										
35	CCOMPETITIVE WIRELESS										
36	CCOMPETITIVE WIRELESS										
37	CCOMPETITIVE WIRELESS										
38	CCOMPETITIVE WIRELESS										
39	CCOMPETITIVE WIRELESS										
40	RESERVED FOR GROWTH	Reserved									
41	RESERVED FOR GROWTH		Reserved				Transfer				
42	RESERVED FOR GROWTH										
43	RESERVED FOR GROWTH										
44	RESERVED FOR GROWTH					ERC					
45	RESERVED FOR GROWTH										
46	RESERVED FOR GROWTH										
47	RESERVED FOR GROWTH										
48	RESERVED FOR GROWTH										
49	RESERVED FOR GROWTH										
50	RESERVED FOR GROWTH	Reserved									
51	RESERVED FOR GROWTH	Transfer	Reserved	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer
52	RESERVED FOR GROWTH	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer		
53	RESERVED FOR GROWTH										
54	RESERVED FOR GROWTH										
55	COMPETITIVE G OGRAPHIC						Reserved				
56	COMPETITIVE GEOGRAPHIC				Transfer						
57	COMPETITIVE GEOGRAPHIC										
58	COMPETITIVE GEOGRAPHIC										
59	COMPETITIVE GEOGRAPHIC										
60	COMPETITIVE GEOGRAPHIC	Reserved									
61	COMPETITIVE GEOGRAPHIC		Reserved								
62	COMPETITIVE GEOGRAPHIC										
63	COMPETITIVE GEOGRAPHIC										
64	COMPETITIVE GEOGRAPHIC										
65	COMPETITIVE GEOGRAPHIC										
66	COMPETITIVE GEOGRAPHIC				Transfer			ERC			
67	COMPETITIVE GEOGRAPHIC										
68	COMPETITIVE GEOGRAPHIC										
69	COMPETITIVE GEOGRAPHIC										
70	COMPETITIVE GEOGRAPHIC	Reserved	Transfer						Transfer		Transfer
71	COMPETITIVE GEOGRAPHIC		Reserved								
72	COMPETITIVE GEOGRAPHIC										
73	COMPETITIVE GEOGRAPHIC										
74	COMPETITIVE GEOGRAPHIC										
75	COMPETITIVE GEOGRAPHIC										
76	COMPETITIVE GEOGRAPHIC										
77	CCOMPETITIVE WIRELESS								ERC		
78	CCOMPETITIVE WIRELESS	Transfer					Transfer	Transfer			
79	CCOMPETITIVE WIRELESS					Transfer	Transfer				

.

NXX	ALLOCATION	0	1	2	3	4	5	6	7	8	9
80	CCOMPETITIVE WIRELESS	Reserved	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer	Transfer
81	CCOMPETITIVE WIRELESS		Reserved								
82	CCOMPETITIVE WIRELESS										
83	CCOMPETITIVE WIRELESS										
84	CCOMPETITIVE WIRELESS										
85	CCOMPETITIVE WIRELESS										
86	CCOMPETITIVE WIRELESS										
87	CCOMPETITIVE WIRELESS			Transfer							
88	CCOMPETITIVE WIRELESS									ERC	
89	CCOMPETITIVE WIRELESS										
90	COMPETITIVE GEOGRAPHIC	Reserved									Transfer
91	COMPETITIVE GEOGRAPHIC		Reserved								Transfer
92	COMPETITIVE GEOGRAPHIC		Transfer								
93	COMPETITIVE GEOGRAPHIC			Transfer			Transfer	Transfer			
94	COMPETITIVE GEOGRAPHIC										
95	COMPETITIVE GEOGRAPHIC									Transfer	Transfer
96	COMPETITIVE GEOGRAPHIC										
97	COMPETITIVE GEOGRAPHIC							Transfer			
98	COMPETITIVE GEOGRAPHIC	Transfer									
99	COMPETITIVE GEOGRAPHIC	Transfer					Transfer		Transfer		ERC

KEY

RESERVED FOR SPECIAL USE		ERC	
RESERVED FOR GROWTH		GEOGRAPHIC	
TRANSFER		COMPETITIVE WIRELESS	

JAMAICAN

CENTRAL OFFICE CODE ASSIGNMENT GUIDELINES

May 2002

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The National Numbering Plan
A Consultative Document
Document No. Tel 2002/03
Office of Utilities Regulation

1.0 PURPOSE AND SCOPE

These Central Office Code Assignment Guidelines (Guidelines) were developed for the administration of Central Office Codes (CO Codes) within Jamaica. 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 contained therein.

These Guidelines apply throughout Jamaica subject to governmental policies and regulatory requirements. The Office of Utilities Regulation (the Office) is the telecommunications regulator for all Telecommunications Service Providers in Jamaica. Under the Telecommunications Act 200, the Office is authorized to administer numbering resources, including but not limited to CO Codes, in Jamaica.

The term CO Code refers to digits D-E-F of the 10-digit North American Numbering Plan (NANP) area address. In the NANP, 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., 968 is the CO Code in 876-968-6053). Examples of uses for CO Codes for which these Guidelines apply include plain old telephone service (POTS), Direct Inward Dialling (DID), cellular mobile service, pagers, data lines, facsimile, coin phones, and customer owned pay phones.

Costs associated with CO Code administration and assignments are not addressed in these Guidelines.

2.0 ASSUMPTIONS AND CONSTRAINTS

The development of the Jamaican Central Office Code Assignment Guidelines include the following assumptions and constraints:

2.1 NANP resources, including those covered in these Guidelines, are managed by the NANP Administration (NANPA), the Jamaican National Numbering Plan Administrator (The Office), and numbering resource assignees (e.g., CO Code Holders), based upon administration guidelines under the oversight of the North American regulatory authorities (e.g., OUR, CRTC, FCC).

The NANP resources are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered, or leased by the assignee for a fee or other consideration except in a manner consistent with Office direction.

If a resource is sold, brokered, bartered, or leased for a fee in a manner not consistent with the Office's direction, the resource is subject to reclamation by the administrator.

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 the Office 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 the Office of the transfer of the CO Code to the entity acquiring the business or portion thereof.

2.2 NANP numbering 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 and delay the need to develop and implement costly new numbering plans. Efficient resource management and Code conservation are necessary due to the impacts of expanding the numbering resource (e.g., NANP expansion from 10 to I 1 or more digits). Impacts include

a) Customer impacts (e.g., dialling, changes to advertising and stationary, etc.)
b) CPE modifications
C) Domestic and international switching and terminal hardware and software modifications
d) Operational support systems modifications
e) Reprogramming of non-telecommunications data bases that contain telephone numbers

2.3 These Guidelines address the assignment and administration of CO Codes including the entry of routing and rating data into the Telcordia Routing Data Base System (RDBS), Business Rating Input Database System (BRIDS) and Line Information Database (LIDB) Access Support System (LASS). The entry of routing and rating data into the Telcordia database systems is required in order to notify the industry via the Telcordia industry notification outputs. Examples of RDBS outputs are the Local Exchange Routing Guide (LERG) and the NPA/NXX Activity Guide (NNAG). Examples of BRIDS outputs are the Terminating Point Master (TPM) and 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 Telecommunications Service Providers an users.

2.4 The Code Applicant must be licensed to operate in the Jamaica and demonstrate, in the manner determined by the Office, that all applicable regulatory authority

required to provide the service for which the CO Code is required has been obtained.

2.5 These Guidelines should provide the greatest latitude in the provision of telecommunications services while effectively managing a finite resource.

2.6 Modifications to these Guidelines may be required to address future number portability and number pooling requirements.

2.7 Administrative assignment of the CO Code public resource by an entity does not imply ownership of the resource by the entity performing the administrative function, nor does it imply ownership by the entity to which it is assigned.

2.8 Audits may be performed in conjunction with the CO Code assignment process. These audits would be expected to ensure: (a) uniform and consistent application of these Guidelines by the Office to all CO Code requests received; (b) compliance with these Guidelines by Code Applicants, Code Holders and, the Office; (c) the efficient and effective use of numbering resources by Code Applicants and Code Holders; and (d) efficient and effective management of numbering resources by the Office.

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

2.10 Code Applicants and Code Holders must obtain 0perating 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.

3.0 ASSIGNMENT PRINCIPLES

The following assignment principles apply to all aspects of the Jamaican Central Office Code Assignment Guidelines:

3.1 CO Codes, as part of NANP telephone nu mbers, are to be assigned only to identify initial destination addresses in the Public Switched Telephone Network (PSTN), 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 demonstrate that these Guidelines are satisfied.

3.3 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 adequately safeguarded by the Office. Information required for input into the appropriate telecommunications industry routing and rating database systems (e.g., Telcordia RDBS and BRIDS) will become available to the public 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 Code Applicants for CO Codes must comply with all applicable Jamaican telecommunications regulations that apply to the services that they wish to provide.

3.6 Any entity that is denied the assignment of one or more CO Codes under these Guidelines has the right to appeal that decision per Section 10.

3.7 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 non-assignable codes below:

3.8 - any Nl I Service Code (i.e., 211, 311, 411, 511, 611, 711, 811, 91 1),
- any NOO code (i.e., 200, 300, 400, 500, 600, 700, 800, and 900)*,
- projected future home and neighbouring NPAs*, and
- any codes allocated or assigned for special purposes such as 555 for information services, 950 Feature Group B Access, 976 for local pay per call services, and Local Plant Test Codes (i.e., 958 and 959).

4.0 CRITERIA FOR THE ASSIGNMENT AND RESERVATION OF CENTRAL OFFICE CODES

CO Codes shall be assigned and reserved on a first-come, first-served basis. The criteria in the following sections shall be used by the Office in reviewing requests for CO Code assignments and reservations from "Telecommunications Service Providers" 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 by the minister and provided all the criteria in Sections 4.1.1 through 4.1.5 are met.

4.1.1 An Initial Code will be based on identification of a new switching entity,[3] physical Point of Interconnection (POI), or unique Exchange Area Rate Centre' (Parish) consistent with regulatory requirement. 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 (Part 1) certifying that a need exists for a CO Code assignment.

4.1.3 The Code Applicant must be licensed to provide the service for which the CO Code is requested. An application for an Initial Code must include documentation demonstrating that all applicable authority required has been obtained, unless such documentation has already been provided with a prior Initial Code request. The Office shall consider any formal written advise to an entity, from the Minister of Industry, Commerce and Technology, stating that that entity has been granted a license to provide telecommunications services (e.g., local switched services), as appropriate authorization for Initial CO Code assignments.

4.1.4 The Code Applicant must submit or have submitted a Central Office Code Utilization Survey (COCUS) to the Office for the NPA in which the CO Code is being requested.

4.1.5 All information provided on the Jamaican Central Office Code Assignment Request Form will be considered confidential, with selected information made available publicly only for those fields that must be input to the RDBS and BRIDS. The information placed in the RDBS and BRIDS becomes public upon assignment of the new CO Code in the appropriate routing database product.

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 4.2.3. By completing the Jamaican Central Office Code Assignment Request Form, the Code Applicant certifies that their existing resources cannot reasonably meet this requirement.

4.2.1 For an Additional Code for Growth, the Code Holder must certify in section 1.6 of the Jamaican Central Office Code Assignment Request Form 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 (complete Appendix B Months To Exhaust Certification Worksheet).

4.2.2 An Additional CO Code for a Unique Purpose 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 the Jamaican Central Office

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

Code Assignment Request Form why ail additional CO Code is required and explain why existing resources assigned to that entity cannot satisfy this requirement.

4.2.3 An Additional CO Code for a Unique Purpose is necessary for other reasons. The "Code Applicant" must justify in section 1.7 of the Jamaican Central Office Code Assignment Request Form 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 the Office 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. 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 telecommunications services and network routing arrangements for other carriers (i.e., CO Code sharing); however, the Code Holder should ensure that technical, billing, service delivery, and tariff issues are addressed before implementing CO Code sharing. When a Code Holder shares the CO Code with another entity, both parties will be responsible for ensuring that all regulatory requirements in relation to its use are met. Any required business arrangements are the responsibility of the Code Holder and are beyond the scope of these Guidelines.

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

In order to reserve a CO Code, the Code Applicant must submit a Request for CO Code Assignment Form (Part 1) certifying that a need exists for a CO Code reservation and providing a proposed effective date for CO Code activation, which is within twelve months from the date of the initial application. The Code Applicant must subsequently submit a second Part I Form to apply for the assignment of the reserved CO Code. See Appendix C for timeliness.

4.4. 1 Upon written request to the Office, one reservation extension of six months will 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".

4.4.2 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.

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

4.4.4 When a reservation was requested due to technical constraints solely (e.g., Step-by-Step switches, the reservation may be extended beyond the maximum eighteen months period by the Office until the constraint is no longer present, subject to, the Office's approval.

4.5 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.

4.6 The Industry standard Plant Test Codes are 958 and 959. Upon request, the Office 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 RDBS and BRIDS databases. Code Applicants must submit a completed Jamaican Plant Test Code Application and Office Response Confirmation Form (see Appendix F). The Office 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 Part I to the Office requesting a permanent assignment of the CO Code.

5.0 RESPONSIBILITIES OF THE OFFICE

The CO Code assignment functions of the Office are to:

5.1 Provide an Office web site where copies of the most recently approved Jamaican Central Office Code Assignment Guidelines including forms may be obtained by Code Applicants and Code Holders. Provide a paper copy of the Guidelines when requested by Code Applicants.

5.2 Receive applications for CO Codes in Jamaica

5.3 Determine if the CO Code request is in compliance with these Guidelines.

5.4 Respond to the Code Applicant within 14 calendar days from the date of receipt of Jamaican Central Office Code Assignment Request Form or the Plant Test Code Application Form by completing the Office's Response/Confirmation Form that is part of these Guidelines. Send a copy of the Response/Confirmation Form to the Code Applicant (Respond means either seek additional required information, assign CO Code or Plant Test Code, reserve CO Code, deny CO Code or Plant Test Code, suspend assignment activity with explanation of CO Code or Plant Test Code, or

indicate NPA is in jeopar4y). Provide specific reasons for the denial of CO Code and Plant Test Code applications, when appropriate, to the Code Applicant in writing and, upon request, advise the Code Applicant of the Appeals Process described in Section 10 Appeals Process.

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

5.6 Perform the Office 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 Jamaican Central Office Code Utilization Survey (COCUS).

5.9 Concurrent with assignment of a CO Code to a Code Applicant, inputs the NPA, NXX, OCN of the code applicant, effective date, switch/POI CLLI and Rate Centre (provided by the Code Applicant on the Part 1 Request for Central Office Code Assignment Form) to the Telcordia Technologies Inc. Business Integrated Routing and Rating Database System (BIRRDS) via the ACD (Assigned CoDe record) screen. The input of the above information into BIRRDS will permit the Code Holder and/or its agent to enter the information contained in Part 2 Routing And Rating Information Forms 1 - 8 into RDBS in order to initiate the CO Code activation process (see Code Activation Time Line in Appendix C). In addition, at the request of the Code Holder, the Office shall input into the BIRRDS database via the ACD screen any updated information (e.g., transfer of a CO Code from an ILEC to a WSP, transfer of a CO Code from one entity that is merged or acquired by another entity).

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 and 4.4 of these Guidelines. if the assigned CO Code is not placed in-service within this time frame, the Office shall request the return of the CO Code for reassignment. Upon receipt of the Part 4 form confirming that a CO Code has been placed in service, the Office will update the ACD screen to indicate that the code has been activated and the effective date of the activation.

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

5.13 Reserve specific CO Codes. If a Code Applicant requests one of the reserved CO Codes, the Office shall advise the Code Applicant in writing that the CO Code has been reserved and any associated reasons provided by the parties identified above.

Should the Code Applicant be unwilling to accept any other available CO Code, the Office shall respond to the request with a Part 3 Administrator's Response/Confirmation Form marked "Assignment activity suspended by the Administrator." The Office shall complete the "Explanation" section of the Part 3 Office 's Response/Confirmation Form by noting that the Office has reserved the CO Code. The Code Applicant may then request, in writing, that the Office reconsider the reservation of the desired CO Code. The Office may reconsider the Code Applicant's request and decide whether or not to assign the reserved CO Code to the Code Applicant.

5.14 prepare information and reports with respect to the Jamaican NPA and CO Codes. The Office shall not make public confidential information of Code Holders and Code Applicants in any such reports unless duly authorized.

5.15 Participate in audits of the Office, Code Applicants, and Code Holders as necessary to ensure: (a) uniform and consistent application of these Guidelines by the Office to all CO Code requests received; (b) compliance with these Guidelines by Code Applicants, Code Holders and the Office; (c) the efficient and effective use of numbering resources by Code Applicants and Code Holders; and (d) efficient and effective management of numbering resources by the Office.

5.16 Safeguard and keep confidential all information provided by Code Applicants and Code Holders on the Jamaican Central Office Code Assignment Request Form, with selected information made available publicly only for those fields that must be input to the appropriate telecommunications industry routing and rating database systems (e.g., Telecordia BIRRDS).

6.0 RESPONSIBILITIES OF CODE APPLICANTS AND CODE HOLDERS

Code Applicants and Code Holders are responsible for obtaining a current copy of the Jamaican Central Office Code Assignment Guidelines from the Office's web site at http://www.our.org.jm. Code Applicants and Code Holders are responsible for reading, understanding and acting in accordance with these Guidelines. 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 Telcordia databases using the Part 2 Forms. In order to complete the Part 2 Forms, the Code Holder must make the necessary business arrangements including interconnection and associated industry Requirements (e.g., RAO, OCN and Common Language Location Identifier (CLLI) Codes).

Before a CO Code can be assigned by the Office, Code Applicants must submit a letter to the Office on the organization's official stationary, signed by a corporate Officer or other designated individual, 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 the Office. The Office will only process applications submitted by such Authorized Representatives. The Office 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 and/or Additional Code assignments shall submit their requests to the Office using the Jamaican Central Office Code Assignment Request Form (Part 1). One Request Form is required per CO Code requested. The Code Applicant will complete all required entries on the Jamaican Central Office Code Assignment Request Form as well as sign the Form. The Code Applicant must perform technical and business analyses 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.

The Code Applicant is not required to submit the Part 2 Routing and Rating Information Forms to the Office when requesting the assignment of a CO Code. After a CO Code is assigned to the Code Applicant, the Office is required to enter the necessary data into the ACD screens, as set out in section 5.9, within 5 business days. Subsequently, the Code Holder is responsible to enter, or to arrange to have entered, the information required in the Part 2 Routing and Rating Information Forms into the appropriate routing and rating databases (e.g., Telcordia BIRRDS) to notify the telecommunications industry.

6.12 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".

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

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

6.2 Information Required for Code Activation

6.21 Before a CO Code can become active, all Code Holders are responsible for providing routing information for entry into the RDBS and rating information for entry into BRIDS. In addition, any changes to the requested effective date for CO Code activation and/or Operating Company Number (OCN) need to be provided to the Office as soon as the changes occur

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 the Part 1 Jamaican Central Office Code Assignment Request Form by the Office (see Appendix C Code Activation Time Line). This minimum 66 calendar day interval is necessary because of the current industry standard of 14 calendar days

For CO Code Request Processing by the Office, 7 calendar days for entry of Part 2 Forms data into RDBS and BRIDS by the Code Applicant's Administrative Operating Company (AOC), and 45 calendar days Activation Interval for CO Code activation by the NANP telecommunications industry. Requests for an "Effective Date" of less than 66 calendar days after the date of receipt of the Part 1 Jamaican Central Office Code Assignment Request Form by the Office are not permitted, as they would increase the potential for call blocking and/or billing errors. Interconnection arrangements and facilities need to be in place prior to the effective date of CO Code activation. Such arrangements are beyond the scope of these Guidelines.

6.2.3 A Code Holder is responsible to ensure that the CO Code information is input into an appropriate LIDB Access Support System (LASS).

6.2.4 Upon assignment of a CO Code to a Code Applicant, the Code 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. Accordingly, it is the responsibility of the Code Holder to arrange for the entry of any changes into the RDBS and BRIDS databases, and to inform the Office of any changes that affect the Office's assignment records by submitting Part l of the Jamaican Central Office Code Assignment Request and Confirmation Forms, 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 Centre name.
The Office in reviewing a request from a Telecommunications Service Provider to transfer a CO Code from the current Code Holder to the Telecommunications Service Provider making the transfer request shall use the following assignment criteria:

a) The Code Applicant (Telecommunications Service Provider receiving the CO Code to be transferred) must submit a complete Part 1 Form (Request for NXX Code Assignment) to the Office. In addition to the Part I Form, the code Applicant requesting the CO Code transfer must also provide written certification from the current Code Holder agreeing to the transfer of the CO Code.

   In the case of mergers or acquisitions, the entity requesting the transfer of the CO Code(s) must certify that such transfers are permitted and that the merger or acquisition agreement does not involve different types of telecommunications services as defined by NECA (e.g., Incumbent Local Exchange Carrier, Competitive Local Exchange Carrier - Facilities Based, Wireless (paging, beeper, cellular), PCS, Competitive Access Provider, etc.).

   In addition, a transfer of CO Codes from one NECA category to another may occur in other circumstances (e.g. PCS to CLEC, ILEC to WSP). When the transfer of CO Codes is from one NECA category to another, a unique OCN is required for each NECA category.

b) Upon receipt of the documentation required by Item a) above, the Office will modify the Assignment Code Record (ACD) screen in RDBS/BRIDS for the CO Code to be transferred to reflect the OCN of the Telecommunications Service Provider to which the CO Code will be transferred. To the extent necessary, the Office will coordinate the change With Telcordia Technologies TRA.

c) The Office will notify the Code Applicant receiving the CO Code when the ACD screen has been successfully modified by sending a Part 3 Form (Administrator's Response/Confirmation). It is the responsibility of the Code Applicant receiving the CO Code to arrange for the entry of any changes to RDBS and BRIDS data associated with a switching entity/POI.

All time intervals applicable to the assignment of a new CO Code apply in the case of a transfer. These intervals do not address the time intervals needed to perform the network and other rearrangements associated with the transfer.

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 (see Appendix A) 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 the Office 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 Part 4 Jamaican Code Holder's Confirmation of Code In-Service Date Form to the Office. If a Code Holder no longer has need for a CO Code, the Code Holder should return the CO Code to the Office for reassignment. 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", the Office 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, the Office shall return the CO Code to the available pool for future assignment.

6.4 All current and potential Code Holders shall provide forecasted CO Code. requirements input to the COCUS to the Office

6.5 All Code Holders agree to abide by the CO Code reclamation procedure in Section 7.

6.6 (All Code Holders shall assign Location Routing Numbers (LRNS) in accordance with Appendix H of these Guidelines and shall enter LRN data into the Telcordia Technologies RDBS and BRIDS databases in accordance with the requirements for those databases - if Number Portability applies).

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

6.8 All Code Holders are responsible to analyze and resolve numbering problems related to misrouted calls and calls that cannot be completed. Such investigations should be initiated by the Telecommunications Service Provider on whose network the call was originated

7.0 RECLAMATION PROCEDURES

7.1 Code Holder Responsibility

The Code Holder shall return the CO Code to the Office if:

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

When returning a CO Code to the Office, the Code Holder shall complete Section 1.5 of the Part 1 Form to indicate that the CO Code is being returned for future assignment. The Office will confirm the return of the CO Code by providing the CO Code Holder with a Part 3 Form.

It is the responsibility of the Telecommunications Service Provider returning the CO Code to complete a Part 2 Form and provide it to their AOC to arrange for the disconnection and removal of any records associated with the CO Code from RDBS and BRIDS. The AOC will also contact Telcordia to arrange for the permanent deletion of the records associated with the disconnected code. Once the RDBS and BRIDS records have been removed from the Telcotdia databases, the Telecommunications Service Provider returning the CO Code should contact the Office via E-mail to inform them that the data has been removed.

7.2 Office Responsibilities

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

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

In circumstances where the Code Holder voluntarily returns a CO Code to the Office, the Office will acknowledge via an e-mail message receipt of the Part 1 Form from the Code Holder that indicates that a CO Code is being returned. In addition, once the Office has been informed that the RDBS and BRIDS records associated with the CO Code have been removed from the Telcordia databases, the Office will delete the ACD screen associated with the CO Code. The Office will acknowledge this action by completing a Part 3 Form 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 completed Part 3 Form.

When the Office initiates code reclamation in any of the above four instances, the Office shall seek written clarification from the Code Holder

regarding the use of the resource. If the Code Holder provides an explanation satisfactory to the Office 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 the Office, the Office shall initiate action to reclaim the CO Code. The Office shall send a registered letter to the Code Holder's address of record requesting that the Code Holder contact the Office 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, the Office will initiate action to reclaim the CO Code. In the event that the Code Holder refuses to comply with the reclamation procedure initiated by the Office, the Office will take appropriate action.

The Office shall receive and investigate all referred allegations of non-use or misuse of CO Code resources

7.2.2 If the Code Holder does not provide the Office with a Part 4 Code Holder's Confirmation of Code In-Service Date form, 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, the Office 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 the Office 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. The Office 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.

7.2.3 The Office shall not make available for assignment any returned CO Code prior to 66 calendar days after receipt of the Part 1 notification and shall update the Office's website accordingly.

8.0 CENTRAL OFFICE CODE CONSERVATION

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

a) ensure an adequate supply of CO Codes is available at all times to. The Jamaican telecommunications industry,

b) efficiently and effectively administer a limited NANP resource through CO

Code conservation,

c) delay NPA exhaust and the need for NPA relief (e.g., splits/overlays) for as long as possible, and

d) delay the eventual exhaust of the NANP (see Section 3.2).

8.1 A COCUS study will be conducted by the Office, in accordance with the Central Office Code Utilization Survey Guidelines, to identify Telecommunications Service Provider 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 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)

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

b). The Office shall not assign a CO Code that will result in a change to the dial plan (e.g., a change from 7 digit to 10 digit local dialling) without industry consultation.

c) Code Protection (See Glossary) arrangements should be avoided unless required to maintain existing dial plan arrangements. The Office shall maintain and make available a record of protected CO Codes and the rationale for such protection.

8.3 When it is determined by the Office that an NPA requires NPA Code Relief, based on COCUS results and projected demand forecasts, the Office will implement NPA Code Relief activities (see the NPA Relief Planning Guidelines).
When an NPA is declared by the Office to be in a Jeopardy Condition, the Office will assign CO Codes based upon the provisions contained in the NPA Relief Planning Guidelines.

9.0 MAINTENANCE OF THESE GUIDELINES

It may be necessary to modify these Guidelines periodically to meet changing and unforeseen circumstances. Questions regarding these Guidelines, and requests for changes, should be directed to the Office.

10.0 APPEALS PROCESS

Disagreements may arise between the Office, Code Applicants and Code Holders in the context of the administration of these Guidelines. In all cases, the Office, Code Applicants and Code Holders shall make reasonable, good faith efforts to

resolve such disagreements among themselves consistent with these Guidelines prior to pursuing any appeal. Appeals may include but are not limited to either of the following options:

? The Code Applicant or Code Holder will have the opportunity to resubmit the matter to the Office for reconsideration with or without additional input.

? The Code Applicant or the Code Holder that is aggrieved by Office's numbering decisions may appeal to the Appeals Tribunal, in accordance with the Telecommunications Act.

In the event that the Office or Code Holder believes that the dispute has the potential to reoccur, the Office or Code Holder may initiate action to have the guidelines modified as necessary.

11.0 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).
AOC	Administrative Operating Company is an organization that has access to input and update data contained in the Traffic Routing Administration (TRA) and other Telcordia databases. An AOC may, under contract to other entities, provide a data input service to those databases. –Inquiries regarding AOC designation and access to TRA databases should be directed to the TRA at 732-699-6700 or visit their website at www.trainfo.com.
AOCN	Administrative Operating Company Number designated numeric or alphanumeric code assigned by TRA at identifies an Administrative Operating Company.
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	See Business Integrated Routing and Rating Database System
BRIDS	The Telcordia Business Rating Input Data Base System (BRIDS) contains data for the rating of calls. The data in BRIDS supports all CO Codes administered under the Jamaican Central Office Code (NXX) Assignment Guidelines, as well as all Numbering Plan Areas (NPAs) administered under the North American Numbering Plan (NANP). BRIDS is a database

	system that contains North American Numbering Plan (NANP) rating data for Canada, the United States and the Caribbean nations as well as Mexico due to its proximity even though Mexico is not a participant in the NANP. This System generates the Terminating Point Master for billing purposes.
Business Integrated Routing and Rating Database System (BIRRDS)	BIRRDS is the TRA integrated systems environment database that is used by Administrative Operating Company Number (AOCN) companies, including the Jamaican Numbering Administrator (JNA) in its role as Jamaican CO Code administrator, for the creation and modification of routing and rating database records for assigned CO Codes. The BIRRDS system includes other TRA database systems such as RDBS, BRIDS, LASS and CNSS.
Central Office Code	The D-E-F digits of the 10 digit NANP number in a telephone number. Central Office Codes (CO 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).
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.
Jamaican Numbering Administrator (JNA)	The entity responsible for the administration of Jamaican numbering resources including CO Codes within the Jamaican geographic NPA.
Central Office Code Utilization Survey (COCUS)	Study conducted by the JNA as required as one of the methods for identifying NPA Exhaust.
CLEC	Competitive Local Exchange Carrier
COCUS	See Central Office Code Utilization Survey.
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 dialling 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), 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 an ILEC, which normally encompasses a city, town or village and adjacent areas.
ILEC	Incumbent Local Exchange Carriers
INC	Industry Numbering Committee. The INC is a standing committee of the

	Carrier Liaison Committee (CLC) that is sponsored by 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 dialling considerations for public telecommunications 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 CentreExchange Area.
In-Service	An active CO Code in which specific subscribers or services are utilizing assigned telephone numbers.
Jeopardy Contingency Plan (To be developed)	It is 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 JNA.
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.
LEC	Local Exchange Carrier (includes Competitive Local Exchange Carriers and Incumbent Local Exchange Carriers)
LERG	Local Exchange Routing Guide: contains information about the local routing data obtained from the Routing Database System (RDBS). 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 Centre or a switch/POI. The Vertical and Horizontal Coordinates can be used to calculate mileage measurements between two Rate Centres 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 Centre or a switch/POI. The Vertical and Horizontal Coordinates can be used to calculate mileage measurements between two Rate Centres 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	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

APPENDICES:

A. Audit Form (To be added)

B. Months To Exhaust Certification Worksheet
C. Time Lines
D. Plant Test Code Application and CNA Response/Confirmation Form
E. Central Office Code (NXX) Assignment Request and Confirmation Forms:
   Part 1 - Central Office Code (NXX) Assignment Request Forms
   Part 2 - Routing and Rating Information Forms 1 – 8
   Part 3 - Administrator Response/Confirmation Form
   Part 4 - Code Holder's Confirmation of Code In-Service Date Form
F. Aging And Administration Of Disconnected Telephone Numbers

APPENDIX B

MONTHS TO EXHAUST CERTIFICATION WORKSHEET[4]

(Worksheet to be used for Requests for Additional Codes for Growth)

Date: _____

Company Name: _____

Switching Entity/Point of Interconnection (CLLI): _____

NPA: _____ 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[5]): _____

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

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

E. Months to Exhaust[8] = $\frac{\text{Telephone Numbers (TNs) Available for Assignment (A)}}{\text{Average Monthly Growth Rate (D)}}$ = _____

Explanation:_____

---

[4] This Worksheet, or its equivalent, is required to be submitted to the Code Administrator; for audit purposes it must be in the applicant's files.

[5] Definitions of terms may be found in the Glossary section of the Central Office Code (NXX) Assignment Guidelines.

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

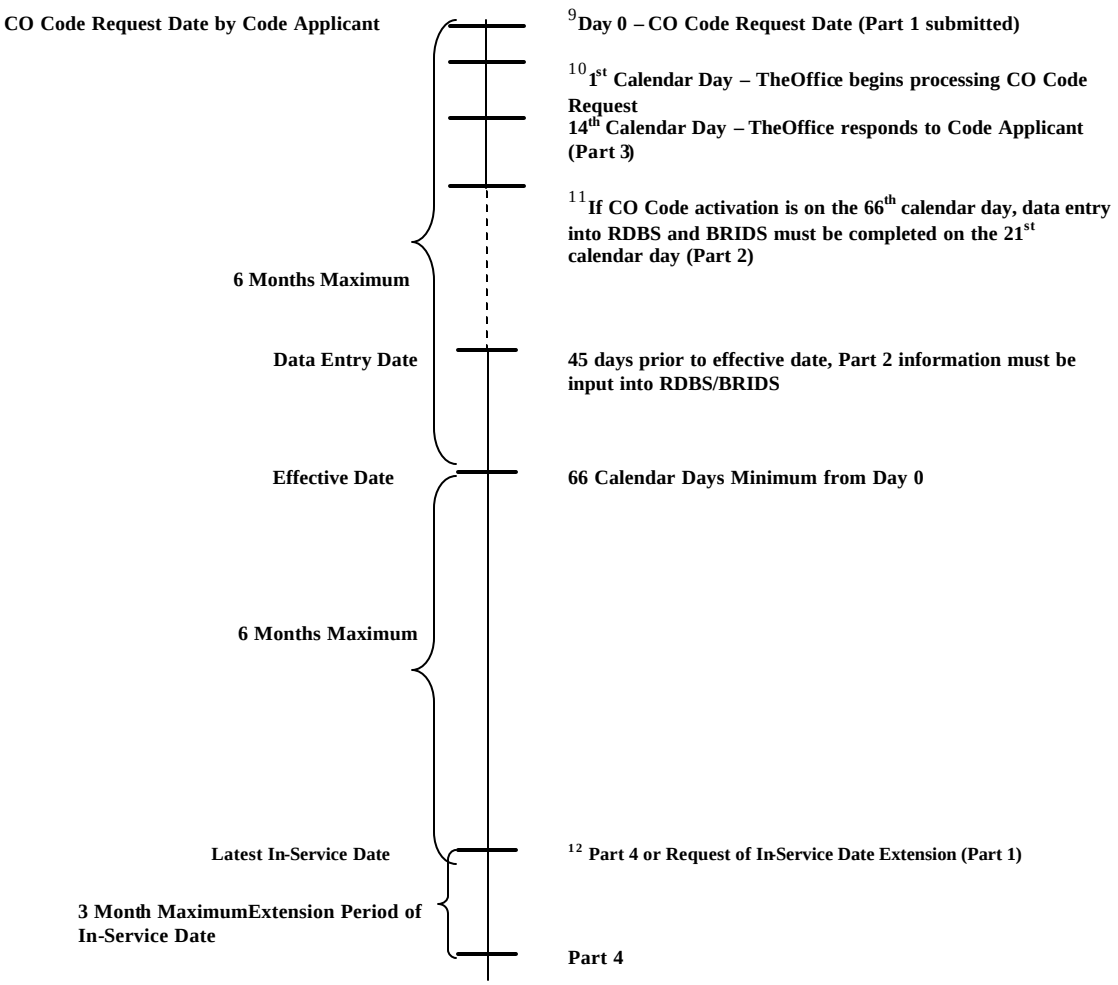
[7] TNs assigned in each following month, starting with the most recent month as Month #1. In a jeopardy situation, only 6 months growth projection is required.

[8] 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).

APPENDIX B

Time Lines

Code Activation Time Line (Initial & Additional)

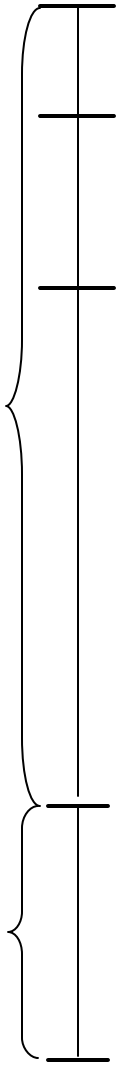


[9] Day 0 may be as early as 6 months prior to the Effective Date, but *no later* than 66 calendar days prior to the Effective Date.
[10] 1st and 14th calendar day intervals commence from Day 0.
[11] This interval may be affected by the occurrence of statutory holidays in Jamaica.
[12] In-Service Date could be up to 6 months after the Effective Date.

APPENDIX B

Time Lines

Code Reservation Time Line



Day 0 – Request for COCode Reservation by Code Applicant

1st Calendar Day – The Office begins processing CO Code Request

14th Calendar Day – The Office 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[13] – Code must be placed in service or returned to the Office

[13] 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 D

PLANT TEST CODE APPLICATION FORM
AND
OUR RESPONSE CONFIRMATION FORM

Code Applicants should complete Part 1 of this form to request the temporary assignment of a plant test code. Mail or fax the completed form to the Office at the address below. A separate form should be used for each plant test code request. The Office will treat the information on this form as confidential.

PART 1: PLANT TEST CODE APPLICATION FORM

(to be completed by the Code Applicant)

Date: _____ OCN: _____

Company Name: _____ Address: _____

Telephone: _____ _____

Fax: _____ City: _____

Contact Name: _____ Province: _____

E-Mail: _____ Postal Code: _____

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 the Office.

_____

Signature of Authorized Representative of Code Applicant

_____

Title

APPENDIX D

PLANT TEST CODE APPLICATION FORM
AND
OUR RESPONSE CONFIRMATION FORM

PART 2: OUR RESPONSE CONFIRMATION FORM

(to be completed by the Office within 14 calendar days of receipt)

Office of Utilities Regulation
P.O. Box 593, 36 Trafalgar Road, Kingston 10, Jamaica W.I.
Tel: 876-968-6057, Fax: 876-929-3635

Date: _____

Plant Test Code Assigned: NPA: _____ NXX: _____

Effective Date of Assignment: _____

Date of Termination of Assignment: _____

Request Denied. Reason:

_____

_____
Signature of Authorized Representative of the Office

_____
Title

ROUTING AND RATING INFORMATION

Although Part 2 forms are revised from time to time, they do not necessarily represent the most current description of data needed for input to the Telcordia™BIRRDS database. Data requirements may change to meet industry needs. During data requirement transition periods, additional and/or different information than may appear on these forms may be requested. The JNA will issue updated forms and procedures as as the data requirements change.

This page is a cover sheet that can be used in conjunction with Part 2 forms.

Form(s) being provided:

Form 1 - CO Code (NXX) ____ Form 5 - No Longer Required

____

Form 2 - Switching Entity/POI ____ Form 6 - Business Office

____

Form 3 - No Longer Required ____ Form 7 –N/A in Jamaica

____

Central Office Code (NXX) Assignment Request- Part 2

Form 4 - No Longer Required ____ Form 8 - Multiple Homing

____

Data Provider Information: Date

_____

Name (first, middle, last) _____

Company

_____

Address

_____

_____

Phone (____)_____-_____ FAX (____)_____-

_____

E-Mail

_____

Note: For an additional code(s) where the rating and routing are identical to an existing code, complete the following:

Use Same Route and Rate Center as: NPA____ NXX____

Comments:_____

_____

For processor's use: Date Received: _____

APPENDIX E

Canadian Central Office Code (NXX) Assignment Request and Confirmation Forms

Cover Sheet

Part 1: **Request for NXX Code Assignme nt (Required)**

Part 2: **Routing and Rating Information (Optional)**[14]

___ New ___ Change

Part 3: **Administrator's Response/Confirmation (Required)**

Part 4: **Confirmation of Code Activation (Required)**

NOTICE: Parts 1, 2, 3 and 4 may be transmitted via paper or facsimile. Part 2 may also be transmitted via e-mail.

Part 1: Request for NXX Code Assignment

Please complete the following form. Use one form per NXX code request. Mail or fax the completed form to the Code Administrator (the Office).

The Code Applicant is on notice that code assignments are granted subject to the condition that all code holders are subject to the assignment guidelines which are published and available from the Office. A code assigned to an entity, either directly by the Office or through transfer from another entity, should be placed in service within 6 months after the initially published effective date.

These guidelines may be modified from time-to-time. The assignment guidelines in effect shall apply equally to all Co de Applicants and all existing code holders.

The Code Applicant and the Office acknowledge that the information contained on this request form is sensitive and will be treated as confidential. Prior to confirmation the information in this form will only be shared with the appropriate administrator and/or regulators. Information requested for RDBS and BRIDS will become available to the public upon input into those systems.

[14] The Code Applicant is not required to submit a completed Part 2 Form (Routing and Rating Information) to the Office. 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 Bellcore Traffic Routing Administration (TRA) RDBS and BRIDS databases in order to notify the telecommunications industry to activate the CO Code in the Public Switched Telephone Network (PSTN).

APPENDIX E

I hereby certify that the following information requesting an NXX 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 the Jamaican Central Office Code (NXX) Assignment Guidelines.

It is understood that the Code Applicant will return the CO Code to the Office 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 these guidelines (an extension can be applied for), or not used in conformance with these assignment guidelines.

_____
Signature of Authorized Representative of Code Applicant

_____
Title

_____
Date

APPENDIX E

1.0 GENERAL INFORMATION

1.1 Contact information:

Code Applicant:

Entity Name: _____ Contact Name: _____
Address: _____ Facsimile: _____
_____ E-Mail: _____
Telephone: _____

Code Administrator Contact Information:

Name: Office of Utilities Regulation
Address: _____ E-Mail: _____
_____ Facsimile: _____
Telephone: _____

1.2 NPA: ____ LATA: ____ OCN: _____
Switch Identification (Switching Entity / POI)[15]: _____
City or Wire Center Name _____ Rate Center[16] _____
Route same as: NPA___ NXX ____ Use Same Rate Center as: NPA ____ NXX ____

1.3 Dates

Date of Application _____ Requested Effective Date _____ [17,18]

Acknowledgment and indication of disposition of this application will be provided to Code Applicant as noted in Section 1.2 within ten working days from the date of receipt of this application.[19]

1.4 Type of Entity Requesting the Code:

a) Local Exchange Carrier _____
Wireless Service Provider _____
Other (specify) _____

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

[15] 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.

[16] Rate Center name must be a tariffed Rate Center associated with toll billing.

[17] The nationwide cut-over is a minimum of 45 days after the NXX code request is input to RDBS and BRIDS. 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.

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

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

c) Is certification or authorization required to provide this type of service in the relevant geographic area?
Yes _____ No _____
(1) If no, explain:
_____
_____

(2) If yes, does your company have such certification or authorization?
Yes ____ No _____
(i) If yes, indicate type and date of certification or authorization (e.g. letter of authorization, license.):
_____
(ii) If no, explain:
_____
_____

d) CO Code (NXX) Assignment Preference ____ (optional)

e) CO Code(s) (NXX) that are undesirable for this assignment, if any _____

1.5 Type of Request (Select One):
_____ Initial code for new switching entity or new point of interconnection (Complete Part 2)
_____ Code request for New Application for existing switching entity or point of interconnection (Code Applicant must complete Section 1.7)
_____ Additional code for growth (Code Applicant must complete Section 1.6)
_____ Update information (Complete Section 2) (CO Code NXX) requiring update _____
_____ Code Reservation only:[20]
_____ Initial Code
_____ New Application (Complete Section 1.7)
_____ Growth (Complete Section 1.6)

1.6 Additional Code Request for Growth (See Section 4.2.1 of the Guidelines)

Basis of eligibility for an additional code for growth assigned to the switching entity/POI assumes the following: the initial code or the code previously assigned to a new application meets the exhaust criteria, as specified in the Central Office Code (NXX) Assignment Guidelines, depending on whether the NPA is in a non-jeopardy situation or a jeopardy situation as described in Section 8.3 of the guidelines. The appropriate situation shall be indicated below (select one).

____ Non-Jeopardy NPA Situation

I hereby certify that the existing CO code(s) (NXX) at this switching entity/POI is/(are) projected to exhaust within 12 months of the date of this application. This fact is documented on Appendix B and will be supplied to an auditor when requested to do so per Appendix A of the guidelines.

____ Jeopardy NPA Situation (see Section 8.4 (c) of the Guidelines)

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

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

1.7 Code Request for New Application (See Section 4.2 of the Guidelines)

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).[21]

____ **Code is necessary for distinct routing, rating or billing purposes**[22]

_____

_____

____ **Other (Explanation required)** The Code Applicant must provide an explanation of why existing resources assigned to that entity cannot satisfy this requirement.

_____

_____

1.8 Authorization for entry of RDBS and BRIDS information (Check applicable space).

_____ I have attached a completed Part 2 of this form. This is the Office's authorization to input/revise the indicated RDBS and/or BRIDS data. Further, I understand that theOffice 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 Office advises me that it 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 Part 2 directly to the AOCN company for input to RDBS and BRIDS.

_____ Part 2 of this form is not attached. RDBS and BRIDS input will be the responsibility of the Code Applicant. The 66 calendar day NANP-wide minimum interval cut-over for RDBS and BRIDS will not begin until input into RDBS and BRIDS has been completed.

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

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

ROUTING AND RATING INFORMATION

Although Part 2 forms are revised from time to time, they do not necessarily represent the most current description of data needed for input to the Telcordia™BIRRDS database. Data requirements may change to meet industry needs. During data requirement transition periods, additional and/or different information than may appear on these forms may be requested. The JNA will issue updated forms and procedures as as the data requirements change.

This page is a cover sheet that can be used in conjunction with Part 2 forms.

Form(s) being provided:

Form 1 - CO Code (NXX) ____ Form 5 - No Longer Required

____

Form 2 - Switching Entity/POI ____ Form 6 - Business Office

____

Form 3 - No Longer Required ____ Form 7 –N/A in Jamaica

____

Form 4 - No Longer Required ____ Form 8 - Multiple Homing

____

Data Provider Information: Date

_____

Name (first, middle, last) _____

Company

_____

Address

_____

_____

Phone (_____)_____-_____ FAX (_____)_____-

_____

E-Mail

_____

Note: For an additional code(s) where the rating and routing are identical to an existing code, complete the following:

Use Same Route and Rate Center as: NPA____ NXX____

Comments:_____

_____

For processor's use: Date Received: _____

Following are CO Code (NXX) data requirements for the Telcordia™ BIRRDS database. Section 1.2 of the COCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form. This form must always be completed for newly assigned CO Codes.

New CO Code	All items are required unless otherwise noted.
Data change	Items 1-4 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-4 should be provided.

1. NPA _____ Numbering Plan Area code (Area Code) in which the CO Code (NXX) has been assigned

2. NXX _____ Central Office Code (the assigned NXX)

3. STATUS _____ E = new code, M = change to supporting data, D = disconnect

4. EFF DATE ____/____/____ Date a new CO Code can first be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy)

5. OCN _____ Operating Company Number

6. LOCALITY _____ Locality in RATE CENTER:_____ (max 10 char ea)

7. COUNTY _____ **Parish** in which the locality resides

8. STATE _____JA_____ Two character code for the state or territory of the locality

9. PLACE NAME: Enter up to 50 characters to identify PLACE NAME to be referenced in billing. Also enter the appropriate two character state code.*

   _____

10. COCTYPE _____ Identifies use of the CO Code (Choose one - EOC, PLN, PMC, RCC, SIC, TST, SP1 , SP2, for ODDBALL codes see Job Aid)

11. SSC _____ Special Service Code - (Choose one (or valid combinations up to four) - A, B, C, I, J, M, N, O, R, S, T, W, X, Z, 8)

* If greater than 10 characters, PLACE NAME will be output and reported as 10 characters to meet some billing system requirements. This is performed via a mechanically processed algorithm.

NPA ______ NXX _____ (Form 1- Page 1-Items 1, 2) EFF DATE ___/___/___ (Form 1- Page 1- Item 4)

- -

12. TR DIG EO ______________ Number of digits to be outpulsed to a switching entity/POI end office by another carrier (e.g. NPA + NXX + line would be 10).

13. TR DIG AT ______________ Number of digits to be outpulsed to a switching entity/POI tandem office by another carrier (e.g. NPA + NXX + line would be 10).

14. NXXTYPE ______________ Identifies use of CO Code (NXX) (Choose one of listed values provided in the COCAG Part 2 Job Aid)

15. BILL RAO ______________ A valid Revenue Accounting Office code.

16. BO CODE ______________ Enter an appropriate Business Office code.

17. CO TYPE ______________ Company Type - (Choose appropriate value 0-9)

18. TIME ZONE ______________ 0-None, 1-Guam/CNMI, 2-Hawaii, 3- Alaska/Yukon, 4-Pacific, 5-Mountain, 6-Central, 7-Eastern, 8-Atlantic, 9-Newfoundland

19. IDDD ______________ International Direct Distance Dialing (Y - if the CO Code (NXX) can place IDDD calls, N - if not)

20. DIND ______________ Dialable Indicator (Y - if directly dialable, N - if not)

21. DAYLIGHT ______________ (Y - if the CO Code (NXX) serves an area that observes daylight SAVINGS savings, N -if not)

22. PORTABLE ______________ (Y/N) Y if line numbers can be ported from this CO Code

NPA ______ NXX _____ (Form 1- Page 1-Items 1, 2) EFF DATE ___/___/___ (Form 1- Page 1- Item 4)

- -

23. --------------- Switch Data and line range information

? Line “a” is required
? Valid switch code(s) (e.g. CLLI[?]) should be entered
? Switch Homing Arrangement (SHA) Indicator should be blank *unless* the switching entity/POI (when defined by the same 11 character SWITCH code that is used for others CO Codes), homes to a different tandem for given functionality (e.g. FG D) that other CO Codes at the SWITCH (see Part 2, Form 8).
? LINE OCN should be the same as on Part 2, Form 1, Page 1 unless known to be otherwise
? TEST LINE is (optional) line number for testing to the CO Code - must be within the range

	LINES FROM	LINES TO	SWITCH	SHA IND	LINE OCN	TEST LINE
a	________	________	__________________	______	________	________
b	________	________	__________________	______	________	________
c	________	________	__________________	______	________	________
d	________	________	__________________	______	________	________
e	________	________	__________________	______	________	________
f	________	________	__________________	______	________	________
g	________	________	__________________	______	________	________
h	________	________	__________________	______	________	________
I	________	________	__________________	______	________	________
j	________	________	__________________	______	________	________

[?] CLLI is a trademark of Telcordia Technologies, inc.

The National Numbering Plan
A Consultative Document
Document No. Tel 2002/03
Office of Utilities Regulation

Central Office Code (NXX) Assignment Request - Part 2, Form 2

Switching Entity/POI (Point of Interconnection) data requirements for the Telcordia™ BIRRDS database. Section 1.3 of the COCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New Switching Entity/POI	All items are required unless otherwise noted.
Data change	Items 1-3 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-3 should be provi ded.

1. SW IDENT _____ A switch identifier code - 11 characters (e.g. CLLI[?]). For Central Office Code assignments this will be the switching entity/POI which will originate and terminate calls from/to the assigned CO Code.
2. STATUS _____ E = new entity/POI, M = change to supporting data, D = disconnect
3. EFF DATE ____/____/____ Date a new switching entity/POI can be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy)
4. EQPT TYPE_____ A valid code designating the specific equipment being used.
5. OCN _____ Operating Company Number
6. LATA _____ Local Access Transport Area code (3 digits, 5 may apply in Florida)
7. VC _____N/A____ The appropriate Vertical Coordinate for the switching entity/POI.
8. HC _____N/A___ The appropriate Horizontal Coordinate for the switching entity/POI.
9. IDDD _____ International Direct Distance Dialing (Y - if the switching entity/POI permits IDDD, N - if not)
10. ---------- Address Data -- (should identify the actual location of the switching entity/POI) ----------

    STREET _____

    CITY/TOWN_____STATE_____Jamaica W.I._____

11. Inter LATA use (default N) (Y/N) _____
12. Point Code (optional) _____
13. Class 4/5 Office _____ (Switch identifier of the "other" side of such offices, if applicable)
14. RSTP ID __ (Only for STPs – pre-established two character code mapping to a Regional STP pair)
15. Inter-company EOC Use (default N) (Y/N) _____

[?] Telcordia and CLLI are trademarks of Telcordia Technologies, Inc

Central Office Code (NXX) Assignment Request - Part 2, Form 2

SW IDENT ___________ (Form 2, Page 1 - Item 1) EFF DATE___/___/___ (Form 2, Page 1 - Item 3)

- -

16. ---------- Homing Arrangements ----------

As may be applicable, enter the appropriate 11 character SW IDENT (e.g. CLLI) to which the switching entity/POI may home to for various feature group capabilities, signaling, etc.

ORIGINATING	TERMINATING	ADDITIONAL
FG B TDM: _______________	FG B TDM: _______________	HOST: _______________
FG C TDM: _______________	FG C TDM: _______________	STP 1: _______________
FG D TDM: _______________	FG D TDM: _______________	STP 2: _______________
OS TDM: _______________	OS TDM: _______________	
FG B INT: _______________	FG B INT: _______________	800 SSP: _______________
FG C INT: _______________	FG C INT: _______________	ISDN FS OFC: _______________
FG D INT: _______________	FG D INT: _______________	ACTUAL SW ID: _______________
LOCAL TDM: _______________	LOCAL TDM: _______________	CALL AGENT: _______________
INTRA TDM: _______________	INTRA TDM: _______________	TRUNK GATEWAY: _______________
CS DATA TDM: _______________	CS DATA TDM: _______________	

17. ---------- Switching Entity/POI Functionalities ---------- Enter an "X" next to all functionalities that apply. (At least one functionality must be flagged.)

END OFC: _	FG B TDM: _	BCR5: _	STP: _	SW56: _
HOST: _	FG C TDM: _	BCR6: _	CCS AC OFC: _	FGD 56: _
REMOTE: _	FG D TDM: _	PRI 64: _		FGD 64: _
DA OFC: _	OS TDM: _	ISDN MULTIRT: _	800 SSP: _	INTRA PRSUB: _
CLASS 4/5: _	INTERMED OFC: _	ISDN FS OFC: _	LNP CAPABLE: _	CALL AGENT _
WIRELESS OFC: _	DA TDM: _	X.75 GATEWAY: _	_	TRNK GATEWAY _
FG D ADJ EO: _	911 TANDEM: _	PACKET X.121: _	_	ACSS GATEWAY _
	FG D ADJ TDM: _	PACKET E.164: _	_	
	LOCAL TDM: _		CIP: _	
	INTRA TDM: _		CSP: _	
	CS DATA TDM: _			

Central Office Code (NXX) Assignment Request - Part 2, Form 2

Central Office Code (NXX) Assignment Request - Part 2, Form 6

Following are Business Office data requirements for the Telcordia™ BIRRDS database. Section 1.4 of the COCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New Bus. Ofc. All items are required unless otherwise noted.
Data change Items 1-4 are required, as are the appropriate element(s) to be changed.
Disconnect Only items 1-4 should be provided.

---

1. NPA _____ Numbering Plan Area code (Area Code) in which the CO Code (NXX) has been assigned
2. BO _____ A numeric code (max 3 digits) used to tie this data to NXX data (Form 1)
3. STATE _____JA_____ Two character state code for the state of the NPA
4. STATUS _____ E = new office, M = change to supporting data, D = delete
5. EFF DATE ____/____/____ Date data for a new office can be used, date supporting data change will be effective or, date of deletion (mm/dd/yy)
6. OCN _____ Operating Company Number
7. Indicate address and telephone information for a Business Office. Also, indicate the particular type of business office(s) to which the address data applies.

Business: Billing ___ Orders ___ **Residence**: Billing ___ Orders ___ **Other**: Title _____

ADDRESS _____

_____ PHONE _____

CITY _____ STATE _____Jamaica W.I._____

Business: Billing ___ Orders ___ **Residence**: Billing ___ Orders ___ **Other**: Title _____

ADDRESS _____

_____ PHONE _____

CITY _____ STATE _____Jamaica W.I.__ _____

Business: Billing ___ Orders ___ **Residence**: Billing ___ Orders ___ **Other**: Title _____

ADDRESS _____

_____ PHONE _____

CITY _____ STATE _____Jamaica W.I._____

Central Office Code (NXX) Assignment Request - Part 2, Form 2

Central Office Code (NXX) Assignment Request - Part 2, Form 7

Following are Location Routing Number (LRN) data requirements for the Telcordia™ BIRRDS database. Section 1.5.1 of the COCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New LRN	All items are required unless otherwise noted.
Data change	Items 1-3 are required, as are the appropriate element(s) to be changed.
Disconnect	Only items 1-3 should be provided.

1.	LRN	_____	10 digit Location Routing Number (LRN) associated with a given switching entity/POI
2.	STATUS	_____	E = newly established LRN, M = change to supporting data D = disconnect of an LRN
3.	EFF DATE	____/____/____	Date the LRN can first be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy)
4.	LRN TYPE	_____	Used to indicate the general purpose for the LRN Identifies use. Primary (P) would be used for the initial LRN for a switching entity/POI. Maintenance (M) may be used for other LRNs for a switching entity/POI.
5.	SWITCH	_____	A valid switch code (e.g. CLLI[?]) should be entered.
6.	LATA Served	_____	Local Access Transport Area code (3 digits, 5 may apply in Florida) that to which the LRN is associated
7.	OCN	_____	Operating Company Number

The following is optional and relates to data requested on Part 2, Form 4 :

8.	RATE CENTER	_____	Identifies the exchange rate center served by the CO Code (NXX) (Maximum of 10 characters)
9.	RC TYPE	_____	If applicable, enter an indicator for the type of Rate Center (choose one - S, Z, /, +)
10.	RC STATE	_____	Enter a two character code for the state or territory of the Rate Center.

[?] CLLI is a trademark of Telcordia Technologies, Inc.

Central Office Code (NXX) Assignment Request - Part 2, Form 2

Central Office Code (NXX) Assignment Request - Part 2, Form 8

Following are Switch Homing Arrangement (SHA) data requirements for the Telcordia™ BIRRDS database. Section 1.6.1 f the COCAG Forms Part 2 Job Aid may be referenced for assistance in completing this form.

New SHA using same 11 character SWITCH as another SHA:
All items are required unless otherwise noted.
Data change Items 1-4 are required, as are the appropriate element(s) to be changed.
Disconnect Only items 1-4 should be provided.

---

1. SWITCH _____ A switch identifier code - 11 characters (e.g. CLLI). For CO Code assignments, this will be the switching entity/POI which will originate and terminate calls from/to the assigned CO Code.
2. SHA IND _____ Switch Homing Arrangement Indicator (01-99)
3. STATUS _____ E = new entity/POI, M = change to supporting data, D = disconnect
4. EFF DATE ____/____/____ Date a new switching entity/POI can be routed to, date supporting data change will be effective or, date of disconnect (mm/dd/yy)
5. ---------- Homing Arrangements ----------

As may be applicable, enter the appropriate 11 character SW IDENT (e.g. CLLI[?]) to which the switching entity/POI may home to for various feature group capabilities, signaling, etc.

ORIGINATING:	**TERMINATING:**	**ADDITIONAL:**
FG B TDM: _____	FG B TDM: _____	
FG C TDM: _____	FG C TDM: _____	
FG D TDM: _____	FG D TDM: _____	
OS TDM: _____	OS TDM: _____	
FG B INT: _____	FG B INT: _____	
FG C INT: _____	FG C INT: _____	ISDN FS OFC: _____
FG D INT: _____	FG D INT: _____	
LOCAL TDM: _____	LOCAL TDM: _____	
INTRA TDM: _____	INTRA TDM: _____	
CS DATA TDM: _____	CS DATA TDM: _____	

[?] CLLI is a trademark of Telcordia Technologies, Inc.

Central Office Code (NXX) Assignment Request - Part 2, Form 2

Part 3: Administrator's Response/Confirmation

Code Applicant:

Entity Name:	_____	Contact Name:	_____
Address:	_____	City/Town, Postal Code:	_____
Telephone:	_____	Facsimile:	_____
E-Mail:	_____		
Date of Application:	_____	Date of Receipt:	_____
Date of Response:	_____	Effective Date:	_____

Code Administrator Contact Information:

Name:	Office of Utilities Regulation	Signature:	_____
Telephone:	_____	Facsimile:	_____
E-Mail:	crobinson@our.org.jm		

___ **NPA: _____Code Assigned: _____** **Date of NXX Code Assignment: _____**

a. Switch Identification (Switching Entity / POI) [23] _____ Rate Centre: _____

b. Routing and Rating information complete: Yes _____ No _____ Additional RDBS and BRIDS information necessary as follows: _____

c. The Code Administrator is ____, is not ____ [24] responsible for inputting Part 2 information into RDBS and BRIDS.

d. To be published in the LERG and TPM by _____ additional RDBS and BRIDS information needs to be received by the code administrator no later than _____.

___ **Code Reserved: _____ Date of Reservation: _____**

Your code reservation will be honored until _____

Switch Identification (Switching Entity / POI): _____

___ **Form incomplete**

Additional information required in the following section(s): _____

___ **Form complete, code request denied.**

Explanation:_____

___ **Assignment activity suspended by the administrator.**

Explanation:_____

Further Action: _____

___ **NPA in jeopardy: Yes _____ No _____**

If yes, refer to Section 7 of the assignment guidelines.

Remarks: _____

Deleted:

[23] 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 shown on Part 1 of this form.

[24] WARNING! It is the code applicant's responsibility to arrange input of Part 2 information into RDBS and BRIDS. The 45 calendar day nation-wide minimum interval cut-over for RDBS and BRIDS will not begin until input into RDBS and BRIDS has been completed.

Part 4: Confirmation of Code Activation

Code Applicant:

Entity Name:	_____	Contact Name:	_____
Address:	_____	City/Town, Postal Code:	_____
Telephone:	_____	Facsimile:	_____
E-Mail:	_____		
Date of Application:	_____	Date of Receipt:	_____
Date of Response:	_____	Effective Date:	_____

Code Administrator 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)[25]: _____

3. Dates:

   Date of Application: _____

   In-Service Date: _____

[25] 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.

AGING AND ADMINISTRATION OF DISCONNECTED TELEPHONE NUMBERS

1. Introduction

This Guideline applies to telephone numbers within Jamaican geographic Central Office NXX) Codes. It identifies the duties of all Service Providers for the Aging and administration of Disconnected Telephone Numbers.

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

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:

1. provide service providers time to fulfill their administrative requirements, e.g., billing cycle completion;

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

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

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

4. Aging Principles

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

2. 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 this Guideline.

3. 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.

4. 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.

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

6. 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.

7. 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 by the Disconnecting Service Provider for the customer who disconnected the telephone numbers

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

In an NPA jeopardy situation, these intervals may be temporarily modified as a result of industry consensus or regulatory order.

Reserved numbers which are released by the customer from reserved status shall not be subject to Aging. Such numbers shall be immediately made available for assignment.

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 Jamaican Central Code (NXX) 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 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;

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.

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 (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 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 which has disconnected the customer's service and telephone number.

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) at the request of the customer, with or without payment.

Residential Service

Service other than 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).

ANNEX B - III

JAMAICAN

INTERNATIONAL MOBILE STATION IDENTITY (IMSI) ASSIGNMENT GUIDELINES AND PROCEDURES

May 2002

The National Numbering Plan
A Consultative Document
Document No. Tel 2002/03
Office of Utilities Regulation

ANNEX B - II

CONTENTS

ANNEX B - II

1.0 PURPOSE AND SCOPE

This document contains the guidelines and procedures for the assignment and use of International Mobile Subscriber Identities (IMSIs) in Jamaica.

1.1 The IMSI was created and formated to provide the unique international identification of mobile terminals and mobile users and to enable these terminals and users to roam among public networks which offer public 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 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 public 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 were developed for consensus approval of representatives of entities within the telecommunications sector of Jamaica.

1.4 These guidelines apply throughout Jamaica. and do not supersede the regulations, procedures or requirements of the OUR or any other appropriate legal or regulatory authority.

1.5 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 1998. The content of this document is in conformance with that iteration of the Recommendation.

Deleted: <#>¶

2.0 REFERENCES

2.1 ITU-T Recommendation E.212, *The International Identification Plan For Mobile Terminals and Mobile users.*

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3.0 IMSI FORMATAND FUNCTION

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

3.2 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.

3.3 The IMSI enables mobile terminals/users to roam among public networks, domestically and internationally, by providing a uniform and unique home network and mobile terminal/user identification that is recognizable by all conforming public 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's home wireless 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 wireless network,
- Mobile station identification for signalling 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

3.3 The format of the IMSI in Jamaica is:

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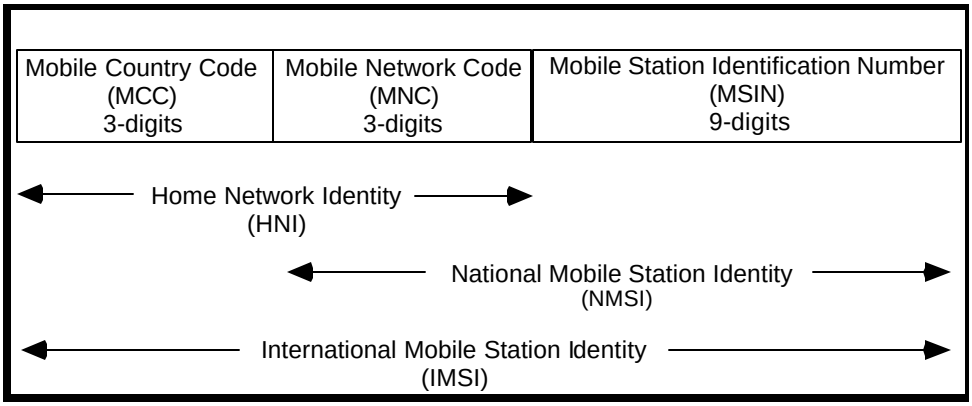

3.5 The IMSI format in Jamaica is a fixed 15-digit length -- the maximum allowable by Recommendation E.212. Each IMSI contains an MCC, an MNC, and an MSIN. The MNC is the segment of the IMSI directly administered by the IMSI administrator. MSINs are administered directly by the network operator to which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

3.6 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 Jamaica is "338".

3.7 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 Jamaica are three digits in length and in the format XXX, where X equals any of the decimal digits 0-9. The 3-digit maximum is necessary so that, when combined with the 3-digit MCC, the visited network need not analyze more than 6 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 thousand MNCs (000-999) for each MCC.

3.8 The function of the MSIN is to uniquely identify a mobile terminal/user within its home network.

MSINs in Jamaica are nine digits in length and in the format XXXXXXXXX, where X equals any of the decimal digits 0-9. Recommendation E.212 limits IMSI length to a fifteen-digit maximum. Since the Jamaican IMSI format includes a six-digit MCC+MNC, a nine-digit MSIN is the maximum allowable. The nine-digit format provides one billion MSINs per MNC or network, if no other function than mobile terminal/user identification is embedded in the MSIN.

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

4.0 ASSUMPTIONS AND CONSTRAINTS

These guidelines are based on the following assumptions and constraints:

4.1 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.

4.2 The functionof the IMSI administrator will be performed by the Office of Utilities Rregulation (the Office), the administrator of the Jamaican National Numbering Plan (NNP)

4.3 Although the quantity of IMSIs currently allocated to Jamaica is substantial, the demand for MNCs may, at some time in the future, exceed the capacity of the MCC initially assigned to Jamaica. Planning for MCC exhaust and obtaining additional MCC resources are discussed in Section 11.

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

4.5 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.

5.0 ASSIGNMENT PRINCIPLES

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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, the widest possible roaming capabilities.

5.1 MNCs are to be assigned and used only by public networks offering mobility services with international roaming capability (Section 1.1).

5.2 Upon application, the Offie will assign one MNC for each valid network operator. Nothing shall preclude a network operator, however, from aggregating multiple or merged networks/licenses within a single MNC.

5.3 The 6-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.

5.4 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.

5.5 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.

5.6 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.

5.7 Should an assignee transfer control of a wireless license, then the use of the assigned MNC is transferable to the new license owner.

5.8 The Office will:

- Assign MNCs in a fair, timely and impartial manner to any applicant that meets the criteria for assignment (Section 6).
- 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 8).
- Treat sensitive information received from applicants as proprietary and confidential, and not to be shared with non-administrator personnel.

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

5.10 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 the Office, three additional 90-day extensions may be granted.

5.11 An entity which is denied an MNC assignment or extension under these guidelines has the right to appeal that decision (Section 13).

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

5.13 An MNC recovered or returned to the Office for reassignment will remain dormant for a period of not less than 1 year, from the date of return to the MNC pool, before reassignment.

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

6.0 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 the Office in reviewing and processing an MNC application:

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

6.2 The applicant/assignee of an MNC must have and provide evidence of authorization, from the Ministry of Industry, Investment and Commerce to operate in Jamaica to provide mobility services with international roaming capability.

6.3 An MNC will only be assigned by the Office upon receipt and approval of a completed *Form A – Home Network Identity (MNC) Application*.

7.0 RESPONSIBILITIES OF MNC APPLICANTS AND ASSIGNEES

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

7.1 MNC applicants and assignees must meet all conditions specified in these guidelines. Copies of the guidelines may be obtained from the Office.

7.2 Applicants must apply in writing to the Office by completing *Form A - Home Network Identity (MNC) Application*. Copies of all required forms are included in Attachment 2 to these guidelines.

7.3 MNC assignees shall:

7.3.1 Assign and efficiently manage the MSINs (last nine 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 (Section 10).

7.3.2 Inform the Office of changes in the information associated with an MNC assignment by using *Form D – 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 5.7). The initial assignee of the MNC involved in a transfer occurring through merger, acquisition or other means must immediately inform the Office when such a change becomes effective. Timely submission of change information enables the Office to maintain accurate MNC assignment records.

7.3.3 Participate in the IMSI audit process, when requested (Section 10).

7.3.4 Deploy any MNC, assigned either directly by the administrator or obtained through merger or acquisition, within the time period specified (Section 5.10). Inform the Office of MNC deployment by submitting *Form C – Mobile Network Code (MNC) Deployment*.

7.3.5 Apply to the Office for an extension (Section 5.10) if the deployment requirement cannot be met and the MNC is still required.

7.3.6 Return to the Office, using *Form F – 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 5.10), or
- Any MNC not used in conformance with these assignment guidelines.

8.0 RESPONSIBILITIES OF THE OFFICE

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

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

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

8.3 Review and process MNC applications as follows:

8.3.1 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.

8.3.2 Inform applicants of the status of their requests using *Form B – Mobile Network Code (MNC) Application Disposition*. 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 A. The response will include:

- If assigned, the specific MNC(s) assigned,
- If denied, the reasons for denial and instructions on how and where to appeal the decision,
- If additional information is required, the specific information required.

8.4 Use the following MNC assignment procedures:

8.4.1 The Office shall generally assign MNCs in numerical sequence within the MCC.

8.4.2 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. These exceptions are set forth below and in the Addenda (if any) to this document.

Accommodation for backward compatibility for existing mobile networks only identified by 10-digit mobile identification numbers (MINs): The following MNCs are not available for assignment in order to support inter-networking with wireless network licensees requiring backward compatibility for existing mobile networks only identified by 10-digit MINs: 3XX–000 through 3XX–009

8.4.3 Applicants eligible for multiple MNCs may request that such MNCs be assigned in the next available block of numerically sequential codes (excepting those MNCs reserved or unavailable for assignment, pursuant to

Section 8.4.2 or any subsequent addenda to these guidelines). In such cases, a separate Form A should be submitted for each MNC required, along with a cover letter requesting their assignment in a sequential block.

8.4.4 When reassigning an MNC that has been returned or reclaimed, the Office will ensure that the MNC has remained dormant for the required period (Section 5.13).

8.5 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 7.3.2). Respond to these requests within ten working days using *Form E – Confirmation of Change of Mobile Network Code (MNC) Assignment Information.*

8.6 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.

8.7 Investigate any MNC that has not been deployed within the required time frame, and issue extensions if appropriate (Section 5.10). Notify the appropriate industry forum if an assignee fails to deploy an assigned MNC within two extensions.

8.8 Reclaim assigned MNCs (Section 9), as needed.

8.9 Direct The IMSI conservation programme and conduct period audits, as required, of MNC assignee records (Cection 10)

8.10 Inform the Jamaican telecommunications industry, via the agreed method, of any evisions to these guidelines (Section 12).

9.0 MNC RETURN AND RECLAMATION PROCEDURES

9.1 Assignee responsibilities:

Assignees will return MNCs that are no longer required, not deployed, or not used in conformance with these assignment guidelines (Sections 5.10, 7.3.5 - 7.3.6).

Assignees will cooperate with the Office in carrying out its reclamation and auditing responsibilities.

9.2 Administrator responsibilities:

The Office will contact any MNC assignee identified as not having returned to the

Office, for reassignment, any MNC no longer required, not deployed, or not used in conformance with these assignment guidelines (Sections 5.10, 7.3.5 - 7.3.6).

9.3 The Office will first seek clarification from the assignee regarding any alleged non-use or misuse. If the assignee provides an explanation satisfactory to the Office, and in conformance with these assignment guidelines, the MNC will remain assigned. If no satisfactory explanation is provided, the Office will request a letter from the assignee returning the assigned MNC for reassignment. If a direct contact can not be made with the assignee to effect the above process, a registered letter will be sent to the assignee address of record requesting that they contact the Office within thirty days regarding the alleged MNC non-use or misuse. If the letter is returned as non-delivered, the Office will make the MNC available for reassignment following the required dormant period (Section 5.13).

10.0 IMSI RESOURCE CONSERVATION AND ASSIGNMENT AUDITS

10.1 Assignment and management of the Jamaican 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 MCCs currently assigned to Jamaica.

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

10.2 The ITU-T will certainly require a compelling reason for the allocation of more than 1 billion MSINs and 1000 MNCs -- the number in the Jamaican 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.

10.3 The Office 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 Office 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,

- Periodic specific and random audits of assignments and assignment procedures.

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

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

10.4.2 The Office will not copy or remove the information from the premises nor will they disclose the information to non-IMSI administrator personnel.

10.4.3 The Office 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 wireless license,

- 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.

10.5 Audit results should be used to identify and initiate specific corrective actions that may be necessary. Examples of specific corrective actions which may be proposed or taken 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.

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

10.7.1 Failure to participate/cooperate in an audit shall result in the activation of MNC reclamation procedures (Section 9).

9.0 MCC RELIEF PLANNING

11.1 When 80% of the MNCs within the MCCs assigned to Jamaica has been assigned, or assignments are exceeding 10% of the resource per quarter, the administrator will inform the industry.

11.2 When the Office determines that the MCC assigned to Jamaica is approaching exhaust, the Office will:

- Conduct an audit of current IMSI assignments to ensure that efficient IMSI utilization is in effect, and, if not,
- Recommend additional procedures to be initiated to effect more efficient IMSI utilization, or if efficient utilization is in effect,
- Obtain additional MCC resources from the ITU-T, if required.

10.0 MAINTENANCE OF GUIDELINES

It may be necessary to modify the guidelines periodically to meet changing and unforeseen circumstances. The need for guidelines modification may be identified by the administrator, any entity in the telecommunications sector or any appropriate Industry forum. When need for modification is identified, the identifying entity will submit the modification issue to the Office. Questions or concerns regarding the maintenance of the guidelines may be directed to the Office.

11.0 APPEALS PROCESS

Disagreements may arise between the Office and MNC applicants or assignees in the context of the administration and management of IMSIs and the application of these guidelines. In all cases, the Office and MNC applicants/assignees will make reasonable,

good faith efforts to resolve such disagreements among themselves, consistent with the guidelines, prior to pursuing any appeal. Appeals may include, but are not limited to, one of the following options:

- The MNC applicant/assignee will have the opportunity to resubmit the matter to the Office for reconsideration with or without additional input.
- The applicant/assignee may pursue the disagreement with the Appeals Tribunal inaccordance with the Telecommunications Act 2000.

Reports on any resolution resulting from the above options, the content of which will be mutually agreed upon by the involved parties, will be kept on file by the Office. At minimum, the report will contain the final disposition of the appeal; e.g., whether or not an MNC was assigned.

12.0 GLOSSARY

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 public mobility services with international roaming capability.

Home network – The network of the service provider to which a given mobile subscriber is subscribed.

International Mobile Susbscriber 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 Mobile Country Code (MCC), the Mobile Network Code (MNC), and the Mobile Station Identification Number (MSIN).

Mobile Country Code (MCC) – 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 or 3 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 of person that contracts to receive or pay for a public 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 Srevice – A telecomunications service that supports mobility for terminals/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 access a public mobility service.

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

ADDENDUM

Temporary Accommodation for "GSM-Based" Wireless Networks

Currently GSM-based wireless public networks can handle only 2-digit MNCs. This limitation can be accommodated, until such time as GSM-based wireless public networks will be modified to support 3-digit MNCs, through the following temporary assignment guideline:

- Until July 1, 2003, MNCs in the format XX0, where X equals any of the decimal digits 0 through 9, are reserved for assignment to Mobile license holders choosing to deploy "GSM-based" technology. When a licensee meeting this requirement requests code assignment, the next such code in numerical sequence will be assigned. Such codes from the next consecutive MCC should not be assigned until all such codes from the preceding MCC have been assigned.

JAMAICAN

SIGNALLING AREA NETWORK CODES/ INTERNATIONAL SIGNALLING POINT CODES (SANC/ISPCS) ASSIGNMENT GUIDELINES

May 2002

The National Numbering Plan
A Consultative Document
Document No. Tel 2002/03
Office of Utilities Regulation

ANNEX B - II

CONTENTS

ANNEX B - II

1.0 Purpose and Scope

1.1 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 Jamaica by the Director of the International Telecommunications Union/Telecommunication Standardization Bureau (ITU/TSB).

1.2 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 Jamaica, the Administration is the OUR (referred hereinafter as the Office).

1.3 These guidelines apply throughout Jamaica and do not supersede the Telecommunications Act or regulations made thereunder or any policies or requirements of the Office, or any other appropriate legal or regulatory authority.

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

2.0 References

2.1 Q.700 (03/93) Introduction to CCITT Signalling System No. 7 **Q.705 (03/93) Signalling System No.7 - Signalling Network Structure** Q.708 (03/93) Assignment Guidelines and Procedures for International Signalling Point Codes (ISPC)

3.0 Principles

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

3.1 The assignment of Signalling Area/Network Codes (SANC) to Member States is the responsibility of the Director of the Telecommunication Standardization Bureau (TSB).

3.2 The assignment of International Signalling Point Codes (ISPC) shall be the responsibility of the Administration of the Member State (The Office)

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

3.4 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); and

3.5 The assignment of ISPCs may be made for test purposes. However they should not be considered as 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, the administrator 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.

4.0 Assignment Criteria

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

4.1 The applicant must provide a service that is authorized by the OUR.

4.2 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.

4.3 The applicant must provide all the requested information on the attached application form and forward the application to:

5.0 Assignment Policy

5.1 The Office will assign ISPCs to qualified applicants from the SANCs assigned to Jamaica 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. The Office may determine if the ISPC has been activated after 18 months, commencing on the date of assignment. If the ISPC has not been implemented, the Office shall reclaim the ISPC. Additionally, ISPCs should be reclaimed if they are no longer in use, being used by an unauthorized 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 the Office on the "usage" of these codes, that is if they are still in use.

5.2 ISPCs assigned from the SANCs assigned to Jamaica by the T.SB shall be used only in Jamaica. Similarly, ISPCs from SANC assigned to countries other-than. Jamaica shall not be used in Jamaica. Should ITU-T study Group 2 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.

APPLICATION FOR INTERNATIONAL SIGNALLING POINT CODE (ISPC)

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FILL OUT SEPARATE APPLICATION FOR EACH ISPC THAT IS REQUIRED

SIGN THE APPLICATION AND SEND IT TO: **The Office of Utilities Regulation**
P.O. Box 593, 36 Trafalgar Rd.
Kingston 10, Jamaica W.I.

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. In-Service 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		

APPLICATION FOR INTERNATIONAI, SIGNALLING POINT CODE (ISPC) - Cont'd)

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The Applicant concurs with the following:

1. The Applicant agrees that the allocated ISPC will be used in Jamaica.

2. The Applicant agrees that items 1, 8 and 9 will be transmitted by the Administrator to the ITU for publication.

3. The Applicant agrees that the allocated ISPC will not be sold, licensed or traded to any other network operator or organization or company.

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

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

6. On an annual basis or as per Office rules prevailing at the time, the Applicant agrees to confirm, in writing, to the Office, the location and address of the switch to whi6h the ISPC was allocated.

7. Before moving the allocated ISPC from one switch to another, the Applicant agrees to inform the Office 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 the Office to the ITU for publication.

…… ……. ……...
Signature of Applicant city Date

(Senior Management or
Designated Representative
should sign this application)