
Office of Utilities Regulation

The Jamaican National Numbering Plan

Determination Notice

Reconsideration Decision



OFFICE OF UTILITIES REGULATION

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PURPOSE OF DOCUMENT

This document sets out the Office of Utilities Regulation's deliberation and decisions regarding Cable & Wireless Jamaica Limited's request for reconsideration of the Jamaican National Numbering Plan Determination Notice

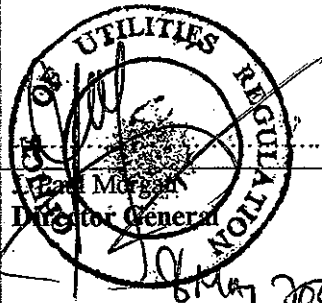
RECORD OF REVISIONS

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APPROVAL

This document is approved by the Office of Utilities Regulation and becomes effective on May 10, 2006.

On behalf of the Office:



Date

8 May 2006

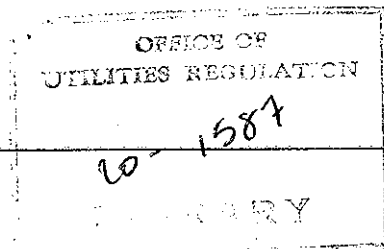
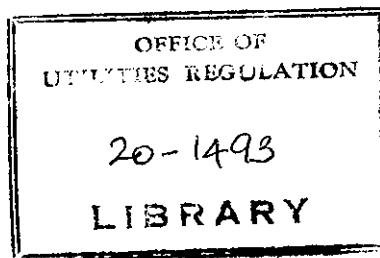


TABLE OF CONTENTS

1. PROCEDURAL HISTORY	2
2. SUMMARY OF CONCLUSIONS AND DECISIONS	2
3. DISCUSSION.....	3
4. CONCLUSION	53
ANNEX 1 REVISED DETERMINATIONS	55



OFFICE OF UTILITIES REGULATION

DETERMINATION NOTICE ON THE NATIONAL NUMBERING PLAN

RECONSIDERATION DECISION

1. PROCEDURAL HISTORY

- 1.1 On November 21 2003, pursuant to consultations with the local telecoms industry, *et al*, the Office of Utilities Regulation (the Office) issued its Determinations in Document No. Tel 2003/10, "The Jamaican National Numbering Plan - Determination Notice", which established a plan for the numbering of telecommunications services in Jamaica, consistent with the provisions of section 8 of the Telecommunications Act, 2000 ("the Act" or "the Telecoms Act"). Among other things, the Determination Notice reviewed criteria for the evaluation, development and management of the National Numbering Plan, allocated numbers for services – present and future, determined the numbering resources to be administered by the Office, and clearly and concisely laid out a plan for a limited migration of services to new number blocks to fit the reorganized numbering scheme.
- 1.2 On December 12, 2003, the Office received Cable & Wireless Jamaica Limited's (C&WJ) "Application for Reconsideration of the Jamaican National Numbering Plan Determination Notice". C&WJ's petition for reconsideration of the Determination Notice was made pursuant to section 60 of the Act, in respect of Determinations 3.2, 3.3, 3.4, 3.5, 3.10, 6.1, 6.2, 6.3, 6.4, 6.5, 7.1, 7.2 and on the grounds that the Determination Notice "*suffers from material errors of law*".
- 1.3 On April 22, 2005, the Office issued a public notice advising of its decision to seek comments by May 27, 2005, on C&WJ's request for reconsideration. The Office subsequently gave notice of a delay of its reconsideration decision but advised that the initial schedule for comments and replies to comments remained and precluded any further comments and any other submissions on the matter.

2. SUMMARY OF CONCLUSIONS AND DECISIONS

- 2.1 Error of law is indeed a ground of review and the Office acknowledged and addressed C&WJ's stated concern about what the company alleged to be material errors of law in the Numbering Plan Determination Notice. The Office held that an expressed concern about such errors of law, as well as concerns over costs of number changes, whether real or perceived, were material numbering plan development considerations.

- 2.2 C&WJ did not provide concrete information to support its contention or to refute the validity, sufficiency or reasonableness of the Office's considerations and actions pursuant to Section 8 of the Act. Further, notwithstanding the declaration in its petition, C&WJ did not demonstrate any intention to "*provide further and better particulars...*" Nor was C&WJ denied the opportunity, or the time specified at section 60(1) of the Act, or a reasonable time thereafter, to present such "*particulars*". C&WJ did not state specifically what relief it sought by the petition for reconsideration
- 2.3 The Office held, that it had made proper considerations in developing the National Numbering Plan and had given proper effect to the relevant provisions of the statute. The Office supported its position with clear evidence from the Consultative Document, C&WJ's documented responses to the consultation, and other credible sources. The Office showed that C&WJ's claims in its petition for reconsideration were variously at odds with the positions asserted by the company in its response to the Consultative Document.
- 2.4 The Office concluded that C&WJ had failed to provide an adequate basis upon which the Office should alter its decisions, on the Jamaican National Numbering Plan.

Consequent upon its review of the Determinations, the Office made three changes as follows:

1. The wording in line 1 of Determinations 6.1 and 6.2 was changed to read "Chapter 7" and not "Chapter 6".
 2. Determination 6.4 was modified to omit '112' from the list of codes in unauthorized use to allow, until otherwise determined by the Office, the dialling of '112' in the Public Land Mobile Network for access to the local police emergency services by inbound international roaming subscribers.
 3. All dates for the migration plan in Determination 7.1 and 7.2 were updated.
- 2.5 With the exception of the foregoing changes, the Office reaffirmed its Determinations in Document No: Tel 2003/10, "The Jamaican National Numbering Plan - Determination Notice".

3. DISCUSSION

General

- 3.1 Cable and Wireless Jamaica seeks reconsideration of the Jamaican National Numbering Plan Determination Notice, and in particular Determinations 3.2, 3.3, 3.4, 3.5, 3.10, 6.1, 6.2, 6.3, 6.4 6.5, 7.1 and 7.2, on the grounds that the Determination Notice suffers from material errors of law.

- 3.2 In its petition for reconsideration, C&WJ stated that the essential element of that application for reconsideration was that “...*the effect of the determinations 3.3, 3.4, 3.5, 3.10, 6.1, 6.2, 6.3, 6.4, 6.5 [would] lead to the migration of large numbers of customers...*” In that connection, the company contended that the Office, in developing the Numbering Plan, had “...*not given due consideration to Section 8 (3) of the Act specifically: ...*” paragraphs (e), (f) and (g) and, consequently, was “...*in breach of its mandate under Section 8(2)*”. On that basis, C&WJ concluded that, “...*the Determination Notice suffers from material errors of law*”.
- 3.3 C&WJ also claimed that the “*OUR has not conclusively proven the need to migrate... customers; and therefore disrupt [that] element of the numbering system maintained by the existing telecommunications carrier*”. In this context, according to C&WJ, “*Determinations 7.1 and 7.2 outlining future consultations and a migration strategy are premature*”.
- 3.4 The Office considers first, C&WJ’s contention that “[*where*] the OUR develops a numbering plan without properly evaluating each criterion, it has not fulfilled its mandate under the Act”, and that “[*this*] is a material error of law.”
- 3.5 It is not precisely clear what C&WJ intended by the phrase “*evaluating each criterion*”, and certainly, it would not help to take the phrase in its strictest definition. However, for transparency of motive the Office responds to say that in developing the Jamaican National Numbering Plan, it did not employ a numbering plan evaluation process that involved weighting a criterion and then assessing, against the criterion, the merits of selected optional approaches to the structuring of the numbering plan. This methodology would be superfluous, given the scope of the development work contemplated.
- 3.6 Although this approach is sometimes mentioned in numbering plan literature, the Office has not observed its application in the development/restructuring of numbering plans in developed and developing countries.
- 3.7 The following statements from the Consultative Document, and C&WJ’s responses to that document, explain the scope of the development work:

“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.

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)...

5.1 ...*This chapter [The National Numbering Plan – The Office’s Proposal] 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.*

3.8 C&WJ stated in its response to the consultative document that “*C&WJ agrees that the OUR need not reinvent the wheel since Jamaica is a part of the North American numbering Plan (NANP)*”.

3.9 For the alternative evaluation methodology that was applied, and which used qualitative functional assessment, the Office employed a set of criteria that corresponded with the statutory imperatives contained in paragraphs 8(3) (b) to (g) of the Act. A perfect one-to-one correspondence was not established between the factors in the two sets of principles because of significant overlapping relationships between some of the factors from the statute. These criteria, as tabulated below, define requirements for numbering schemes in a competitive environment:

Table I Numbering Plan Evaluation Criteria

	CRITERION	CORRESPONDING PARAGRAPH(S) IN SECTION 8(3)
1	The North American Numbering Plan as the basic model	(a)
2	Provide numbering flexibility for undefined future needs	(b) and (d)
3	Provide customers with a broad indication of service type and cost	(c)
4	Support effective competition	(e) and (b)
5	Cost effective and practical for industry implementation (Supported by Paragraphs 5.8 – 5.10 (‘Change Implications’)of the Consultative Document)	(F) and (g)

3.10 A statement accompanied each criterion to explain the context of its application as in the following examples from the Consultative Document:

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 day] 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 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 [service provider] branding [with] numbers because of its anti-competitive potentials.

The allocations proposed by the Office nevertheless give broad [general] 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 [for example] the migration of certain premium services that now use codes in the proposed Geographic category, to the proposed Special Service group[of codes].”

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 to 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, [or result] from pre-existing number allocations. The reorganization/reallocation of the Jamaican NNP ensures that there are adequate resources available to meet these demands*

- 3.11** Following are examples showing varied applications of this process in other countries, that is, the explanation of the context for the application of evaluation criteria:

The United Kingdom

Consultation on the National Numbering Scheme - Oftel, 1996
(<http://www.ofcom.org.uk>)

“WHAT SORT OF NUMBERING SCHEME

Evaluation Criteria

4.1 Before looking at the best way forward for UK numbering arrangements, there needs to be a clear view of what are the essential – and desirable – characteristics of any future Numbering Scheme.

4.2 ...Some detailed criteria are set out below...

Keeping Options Open

4.3 *First and foremost, our numbering arrangements must be able to meet anticipated growth in demand for telecommunications services and be sufficiently flexible to meet as yet unknown future needs, and cope with the rapidly changing telecoms marketplace. The Scheme should be organised in a way that allows for good husbandry of the supply of numbers, and provides reasonable capacity to be kept as a contingency reserve, to meet as yet unspecified future needs. Arrangements should result in efficient utilisation of the UK numbering space – numbers are a finite resource, and the stock should be managed accordingly.*

4.4 *... Numbering arrangements should facilitate new market and technological developments. They should, if and where possible, allow consumers to move up the value chain from basic voice telephony to higher levels of service without needing to go through a number change.*

Supporting Competition

4.5 ...

Cost Effective Arrangements

4.9 ...

Australia

(A) The Telecommunications Act, 1997 (<http://www.acma.gov.au>)

460 Consultation about numbering plan

Before making a numbering plan, the ACMA must:

- (a) cause to be published in a newspaper circulating in each State a notice:
 - (i) stating that the ACMA has prepared a draft of the plan; and
 - (ii) ...
 - (iii) specifying the place or places where the copies will be available....
 - (iv) inviting interested persons to give written comments about the draft to the ACMA ...

(B) Telecommunications Plan 1997 – as amended (<http://www.acma.gov.au>)

“Division 2 Secondary objectives

1.5 Purpose of Division

This Division sets out the secondary objects of this plan.

1.6 Access to end-users

An object of this plan is to facilitate any-to-any connectivity by ensuring that numbers are:

- (a) clearly assigned to a type of service or multiple types of services; and*
- (b) allocated and used responsibly.*

1.8 Consistency with other instruments

An object of this plan is to ensure that the management of numbers under this plan is carried out in a way that is consistent with the requirements of other instruments made under the Act.

1.9 Issue and use of numbers

(1) An object of this plan is to ensure the availability of numbers by promoting efficient issue and use of numbers by carriage service providers and customers.

(2) An object of this plan is to promote and facilitate fairness and equity in:

- (a) the allocation of numbers to carriage service providers; and*
- (b) the issue of numbers to customers by carriage service providers.*

(3)...

1.10 Carriage services

An object of this plan is to ensure the availability of numbers to facilitate:

- (a) the introduction and supply of carriage services; and*
- (b) access by customers, or connection by end-users, to the services; and*
- (c) proper routing of calls by carriage service providers.*

1.11 Call charge and associated services

An object of this plan is:

- (a) to enable end-users to understand the level of call charge for calls to a number;*
- (b) to enable end-users to understand which numbers can be used in connection with the supply of particular carriage services; and*
- (c) to apply the understanding in the management of call costs.*

1.12 Changes to numbers

An object of this plan is to minimise the need for changes to numbers, and to minimize disruption and inconvenience to end-users if numbers are changed.

1.13 ...

Ireland

Numbering in Ireland - Proposals for the 21st Century - Consultation Paper
(<http://www.odtr.ie>)

3 Developing the plan – the factors to consider

3.1 Introduction

The ODTR proposes to consider five main factors when deciding on how to develop the current Irish numbering plan:

- the need to ensure an adequate supply of numbers at all times*
- the need to make the plan as user-friendly as possible*
- the need to give competing service providers equal access to numbering resources*
- the need to minimise disruption to users when changes are made*
- the need to keep the costs of a change to a minimum for service providers.*

Applying these factors will lead to conflicts. For example, it is possible to develop a more user-friendly plan at the expense of user disruption. The ODTR will review responses to the consultation before taking these factors into account. The ODTR also considers it important to ensure any development of the numbering plan is compatible with harmonization requirements of the European Union and international recommendations from the ITU.

3.2 Ensuring an adequate supply of numbers

The numbering plan must ensure adequate supply of numbers at all times to meet demand generated by:

- future growth in existing services; for example, new PSTN lines or the introduction of direct inward dialling*
- new services, such as freephone and personal numbering*
- new service providers...*

It is also important that the plan should preserve options for simple expansion of numbering capacity by adding extra digits.

3.4 Equal access to numbering resources

Rivals to Telecom Eireann will need equal access to numbering resources if they are not to be disadvantaged in competing with the incumbent. This means a requirement for:

- independent and transparent administration of numbering resources*
- identical dialling procedures and number lengths for all service providers competing to offer any given service*
- an adequate supply of numbers and carrier access codes for new entrants.*

3.4 Minimizing the costs to service providers

Numbering changes generate costs for service providers as well as users. Costs include modifying switches and support systems, trapping misdials and publicizing the change. It is clearly desirable to keep these costs to a minimum. But it is also important to remember that these costs are likely to be much smaller than the costs of a change for users or the cumulative benefits of making the plan more user friendly.

3.12 To the associated consultative question:

“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?”

C&WJ replied:

“C&WJ is in support of the evaluation criteria. However the Office has omitted one criteria which C&WJ wishes to see added and that is found in Section 8(3) (g) of the Telecommunications Act 2000”

3.13 The omission mentioned by C&WJ was actually given treatment in paragraphs 5.8 – 5.10 of the Consultative Document, under the heading ‘**Change Implications**’. The reader was referred to that section of the Document in the explanation of the criterion, “**Cost effective and practical for industry implementation**”, which corresponded with paragraphs (f) and (g) in Section 8(3), and which is reproduced below.

- ***Cost effective and practical for industry implementation***

Inevitably, there will be some CO Code reallocations within categories of codes, 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 minimised.

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 current and proposed CO Code matrices in Annex B highlight 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...

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.

3.14 The Office acknowledges that this statement, more than those explaining the other criteria, addresses the *application*, as against providing *explanation*, of the principles that guide numbering plan development decisions. These principles, nonetheless, are made clear throughout the Consultative Document. However, this statement, compared with the Australian and Irish equivalents regarding *cost to customers* and *impact on service providers*, cannot be considered deficient. In the case of *cost to customers*, the Irish statement is the equivalent of what the Office proposed in the Consultative Document and adopted in Determination 7.2 as measures to facilitate migration of services/customers. The Irish document identifies the factors as what customers want in the event of number change. The Irish statement commences as follows:

“No one likes [his or her] telephone number to change. But change is sometimes vital to ensure an adequate supply of numbers. The cost of number changes to customers is substantial [changing stationery, signs...], but the cost of running out of numbers is considerably higher. Experience in other countries indicates that, when change is needed, users want:

- *adequate advance notice of the change*
- *...”*

The Australian statement is reproduced below:

“An object of this plan is to minimise the need for changes to numbers, and to minimize disruption and inconvenience to end-users if numbers are changed”.

3.15 This Office’s statement regarding both factors might have been made more prescriptive as follows:

Change in numbering arrangements gives rise to costs to carriers, service providers and customers. The costs and inconvenience of required change should fall within reasonable bounds and be outweighed by the overall benefits both in the short and long term.

It is generally better to make changes early, with fewer players in the market than later when such changes undoubtedly will be more costly.

Change must be technically feasible and reasonably practicable to implement. Timescales and procedures for implementing changes to the numbering plan should be considered based on what is practicable and convenient for all stakeholders.

Allocation Changes for a new numbering plan should not unduly alter allocations previously made to existing carriers and service providers. However, the retention of existing allocations should not give incumbent telecoms operators an unfair competitive advantage.

3.16 The Office will adopt this statement in place of the previous one. The succeeding discussions in this document will show that these principles were adhered to by the Office and were consistent with the requirements of the Act. They will also serve for any future development of the National Numbering Plan.

3.17 Digicel's reply to the preceding question was:

"The criteria identified are in keeping with international standards and also are applicable for the Jamaican market. Digicel is in general agreement with them except for the specific comments made above"

3.18 Digicel was concerned about the prohibition of service provider branding and the possibility of customer migration. However, the subsequent allocation of the 4XX range to Mobile services precluded the migration of the company's customers.

3.19 The Office is of the view that - and this will be demonstrated further, in the following section - it has properly evaluated the Numbering Plan against a set of criteria that is generally considered the touchstone of numbering plan design/development.

Review of Statutory Considerations

3.20 To respond more fully to the company's claims, the Office will address each of the seven paragraphs in Section 8(3) of the Act since the three paragraphs, (e), (f) and (g), with which C&WJ "*specifically*" is concerned, are conditional upon the other four, (a), (b), (c) and (d). The Discussion proceeds with the quoting of the pertinent paragraph followed by a review of the Office's understanding, deliberations, actions, etc, in relation to that paragraph, to show that the Office has, in fact, given due consideration to the relevant numbering criteria in its development of the National Numbering Plan.

Paragraph (a) - "...take into account relevant international regulations":

3.21 Paragraphs 2.6 and 2.7 of the determination notice affirm the OUR's recognition and consideration of this statutory requirement as follows:

“2.6 The NANP is an integrated Numbering Plan, serving a community of interests. Hence, member-states (including Jamaica) have limited freedom in designing their national numbering plans. They must take into account such overriding factors as:

- *The fixed structure of the NANP*
- *The authority, and degree of interfusion, of the regulatory systems that govern the NANP*
- *The quantity, nature, availability and prescribed purposes of NANP-authorized numbering resources*

2.7 There is statutory support in Jamaica for this principle, as [set out]in...subsections (2) and (3)(a) of section 8 of the Telecommunications Act, 2000, which state:

“(2) ...the Office 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 services providers.

(3) For the purposes of subsection (2) the office shall –

(a) take account of international regulations;

(b) ...”

3.22 In its practical application of the above principle, the Office has taken into account relevant NANP and other international standards as follows:

- retention of the basic 10-digit NANP structure for telephone numbers. The limit set by the International telecommunications Union in its E.164 Recommendations is 15 digits. Jamaica’s numbering space is 876-NXX-XXXX where N represents digits 2 through 9 and X represents digits 0 through 9.
- non-use of N11 codes as central office codes (see paragraph 4.70 of consultative document) in accordance with NANP standards.
(http://www.nanpa.com/number_resource_info/n11_codes.html).
- use of Star (*) derivatives, and only those, for vertical services codes (see paragraph 4.70 of Consultative Document)
- non-use of the Number Sign (#) character for purposes other than end of dialling, and operator signalling indicators (see paragraph 4.71 of Consultative Document).
- adoption (and adaptation) of the NANP guidelines for the administration and use of central office codes in Jamaica (see Annex B of the Consultative Document).

- adoption (and adaptation) of the International Telecommunications Union's guidelines for the administration and use of numbering resources such as International Mobile Identifiers (IMSI), International Signalling Point Codes (ISPC) and Data Network Codes (DNC) (see Annex B of the Consultative Document).

3.23 It is important to note that the Industry Numbering Committee (INC) which developed, by an industry consensus process, most of the numbering Guidelines used in the NANP area, declares in the documents, that the Guidelines:

"...do not supersede controlling appropriate NANP Area governmental or regulatory principles, guidelines and requirements..." but that "...these industry consensus guidelines are expected to apply throughout the NANP Area subject to guidelines and constraints of the NANP Area administrations, unless the affected administrations direct otherwise".

3.24 Regarding responsibilities for numbering resources: The North American Numbering Plan Administrator (NANPA) assigns NANP resources, with the exception of central office codes (they assign these for the US only), for use within all NANP countries. However, the OUR has plenary authority over numbering resources used in Jamaica. For example, NANPA is the authority for the assignment of area codes but the OUR has complete control over the assignment, management and use of the subsumed central office codes and telephone numbers for all area codes assigned to Jamaica. But the participating countries of the NANP share NANP numbering resources cooperatively and are therefore obliged to ensure efficient and effective use of such resources as a safeguard against premature exhaustion of the NANP and to guarantee the proper routing of calls. The reallocations in the Jamaican National Numbering Plan seek to satisfy this dual obligation.

Paragraph (b) - "...ensure that sufficient numbers are available for current and reasonably anticipated future needs for carriers and service providers":

3.25 The Office devoted extensive discussion (chapter 3) in the Consultative Document to a comprehensive analysis of the existing status of telephone numbers in Jamaica, and the foreseeable future demands for these resources. On the basis of that analysis, the Office made proposals for number allocations for existing and future needs.

3.26 The OUR's number allocation scheme is largely consistent with C&WJ's "876 NPA AREA CODE PLAN" dated October 18, 2001, which it presented to the Office as its existing number allocation plan (see Table 2). **It is submitted that the Office's decision in this regard satisfies requirements of section 8(3) (g) of the Act.**

3.27 Allocations for Mobile services, Special Services and the space reserved for growth were altered to accommodate growth in the local Mobile market. Allocations for Special

Services were reduced from 510,000 (including NXX 976), set by C&WJ, to 160,000. The latter figure is exceedingly more realistic and still exceeds allocation levels in more advanced markets. Expectations for substantial investments in the Fixed Line sector, buoyed by emerging alternative last mile access modes, justified the substantial Geographic allocation for Fixed Network Services Providers. The Office assigns numbers to facilities-based Service Providers.

3.28 The Allocation of the 1XX number range has provided network operators with a fair amount of flexibility in number use with respect to their own internal short code requirements. The YYY codes offer good prospects for the development of an independent short code regime for the local telecoms industry.

3.29 Should it become necessary for Jamaica to acquire an additional area code, the North American Numbering Plan Administrator would be prepared to issue a second code, subject to the appropriate proof of need. The same is true with regard to any future need for an additional E.212 Mobile Country Code in Jamaica. Mobile Country Codes are assigned by the International Telecommunications Union (ITU) to national administrations – in Jamaica, the OUR. The Office already has twice requested, and received, additional International Signalling Point Codes (ISPC) from the ITU. The ITU places strict limits on the amount of ISPCs it issues at any one time to a requesting administration. Virtually all of the previously available ISPCs were assigned to C&WJ.

3.30 To the question - in the Consultative Document:

“Do you agree with the Office’s assessment of the adequacy of the existing supply of codes for the foreseeable future?”

Cable & Wireless Jamaica responded: “yes.”

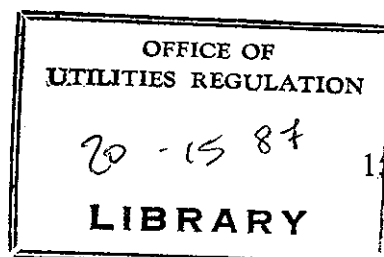
3.31 Again, to the question:

“What are your views as to the appropriateness of the proposed resource allocation categories and the corresponding levels of number allocation?”

Cable & Wireless Jamaica responded: *“C&WJ, in general, agrees with the appropriateness of the resource allocation categories, with the exception... The 55X – 59X number ranges should not be considered for geographic allocation... the 55X – 59X number ranges should be reserved for growth”* (page 9 of CWJ-RD).

3.32 To the question - in the Consultative document:

“Do you agree with the proposed basic principles (Paragraph 5.3) to govern the use of numbers in the respective categories...?”



- 3.36** It is important to note that the practice of categorizing numbering spaces into **geographic** and **non-geographic** is practically universal. In addition, within non-geographic ranges, for many national implementations, Mobile is distinguished from other non-geographic services instead of being lumped in one general sum. In Canada, for instance, Mobile numbers are differentiated at the Area Code level. Also, as emphasised in the 1999 Oftel Consultative Document on numbering, and echoed in the OUR's Consultative Document, "*numbers can convey only a limited amount of information...*" This is so partly because some types of information may be mutually exclusive or otherwise contentious in their representation. For instance, it may not be feasible to efficiently, or at all, use a set of numbers simultaneously to identify locality and cost. The ITU publication "Numbering Trends: A global Overview - by Antelope Consulting" has this to say on the matter:

"Fragmentation of the numbering space: Structuring the numbering plan to provide useful information inevitably leads to inefficiency. For example, the former UK 9-digit numbering space, with 650 small geographic areas, was exhausted at only 3% utilisation. Allocating large number blocks to individual service providers (for mobile networks, for example), has a similar effect."

- 3.37** Since C&WJ "...agrees with the appropriateness of the resource allocation categories..." and "...is in support of the evaluation criteria" as applied, it necessarily agrees, by extension, that the Office has satisfied the requirement of paragraph (c).

Paragraph (d) - "...promote efficient use of numbers":

- 3.38** In paragraph 1.2 of the Determination Notice, the Office emphasized the fact that "... numbers have become universally recognized as a public resource, and one to administered for the overall national good". In paragraph 2.3 of the Consultative Document, the Office opined that ... *the husbandry of these resources must be done in an efficient manner to make the best use of them and safeguard supplies to meet future needs...* The seemingly conflicting roles of ensuring that there are always adequate resources to meet the common and unique needs of service providers for growth and the introduction of new services, and ensuring the efficient use of a finite resource, are sometimes difficult to coordinate.
- 3.39** A primary purpose of the reorganization/reallocation of the Jamaican National Numbering Plan by the Office, therefore, is to ensure, optimally, a more efficient but also effective, utilization of the existing numbering space. For example, the location of Growth ranges allows for expansion of services into adjacent ranges, which is an acknowledged principle in numbering plan design and management. C&WJ's somewhat 'erratic' assignments in the 6XX and 7XX ranges for Fixed Line services however has substantially increased the challenge in the achievement of these efficiencies in the 876 NPA.
- However, Number Assignment Guidelines adopted and adapted by the Office impose strict responsibilities on the various stakeholders to optimise efficiency in the

management and use of assigned numbering resources. Numbering rules being developed also will ensure proper management and efficient use of numbering resources.

3.40 To the question - in the Consultative document:

“Do you agree with the proposed basic principles (Paragraph 5.3) to govern the use of numbers in the respective categories...?”

Cable & Wireless Jamaica responded: *“... The use of the proposed guidelines and the audit function therein should suffice to ensure that numbers are used efficiently”.*

That the Office has satisfied the requirement of paragraph (d) in C&WJ’s view is implicit in this C&WJ statement.

Paragraph (e) - “...promote fair and open competition”:

3.41 The promotion of fair and effective competition in liberalized telecommunications markets, from a regulatory standpoint, generally has the following facets:

- Dominant operator regulation
- Interconnection determination
- Fair competition provisions enforcement
- Facilities sharing
- Accounting Separation
- **Fair administration/management of National Numbering Plan** (Listed with the features above to highlight its relative importance)

3.42 *Paragraph (e) focuses on the design, administration and management of a national numbering plan. In this connection, promotion of fair and open competition, as stated in paragraph 5.2 of the Consultative Document (where ‘support for effective competition’ was given as one element of the minimum set of criteria the reorganized Jamaican National Numbering Plan should meet), “...requires that equal and necessary levels and quantities of numbering resources be made available to competing service providers. This means, firstly, that competing providers should be able to obtain comparable quantities and types of numbers, in accordance with actual needs. Secondly, that qualified service providers should be able to obtain the level, type, and quantity of numbers necessary to offer services that might be unique to them...”*

3.43 These competition-promoting numbering principles are universal and the reorganization/reallocation of the Jamaican National Numbering Plan ensures that there are adequate resources available to meet the demands they impose.

The allocation of Easily Recognizable Numbers and 11X codes (in the ‘Service Provider Specific’ category), and the creation, by the Office, of the *10X – *19X, *56X and,

*94X – *99X numbering spaces in the Numbering Plan, greatly facilitates the second principle. The Office has also held open its invitation to the industry to provide suggestions as to how the allocated Special Services numbering resources that might best serve the industry (see paragraph 3.16 and Determination 3.5 of the Determination notice).

- 3.44** Even if it is true, as sometimes suggested, that in many countries, the regulatory authority tends to view the numbering needs of new and competing carriers in a disproportionate manner, to the disadvantage of the embedded carrier, it is not the case in Jamaica. The Office has endeavoured demonstrably to consider the needs of the embedded carrier and new entrants in an equitable manner and in accordance with all applicable statutory provisions. To this end, the Office assigns all numbering resources on a carrier-neutral (first-come-first-served) basis.
- 3.45** Very importantly, the numbering plan supports fair and open competition through the allocation of numbers by service type. This provides a common feature for a broad identification of types and therefore costs of services – facilitating consumer choice.
- 3.46** The plan also precludes operator branding with numbers, which, in the context of the NANP, would require the assignment of at least one million telephone numbers to each operator, regardless of the extent of their actual numbering needs. This would not only waste numbers but also severely limit the availability of numbers and stifle competition. Operator branding is anti-competitive also because it does not facilitate secondary assignment of numbering capacity to competing non-facilities-based service providers. Besides, there is the fact that “as competition increased and new numbering requirements emerged, it became universally recognized that *“telephone numbers are a national resource and should be for the customer -- not for the operators to brand”* (OECD, 1995; OFTEL, 1993a)”.
- 3.47** However, the Office provides some amount of operator identification by assigning operators contiguous blocks of central office codes. This has been possible because of the applied allocation/assignment arrangements and has benefited Mobile carriers. In the case of Fixed services, C&WJ enjoys almost exclusive identification in the 9XX range as a monopoly legacy
- 3.48** Competing Fixed Line operators, however, will not benefit, to the same extent, from this identification scheme (this is not the same as operator branding) simultaneously with the provisioning for well-ordered growth space, if the existing irregular spread of C&WJ’s NXX codes over the 6XX, 7XX and, to a lesser extent, the 5XX ranges is maintained. Furthermore, this spread of C&WJ’s NXXs has made it difficult to sub-allocate continuous ranges of numbers for different services in the existing geographic numbering space. The only practically reasonable solution to these problems is the migration of C&WJ’s numbers.
- As shown later in this document, the Office has limited the migration of numbers to a level, significantly below what is necessary for what the Office considers the ideal

solution to the problems. The Office's aim, nevertheless, is to ensure that competition is fair and effective to the extent practicable within prescribed statutory boundaries.

3.49 The second requisite for meeting the fairness and openness requirement is the development, approval and implementation of transparent resource Assignment Guidelines that set out the criteria for the assignment and use of numbering resources. The guidelines that are relevant to the matter in question are those that '*... provide direction to the Numbering Administrator, Code Applicants, and Code Holders, with respect to the administration, assignment, activation, and use of CO Codes, etc, and the numbering resources contained therein*'. In this connection, the Office has adapted the Central Office Code Assignment Guidelines developed for the NANP by the Industry Numbering Committee and renamed it The Jamaican Central Office Code Assignment Guidelines. Consultative Document on the Jamaican National Numbering Plan contained these new Guidelines. There were similar adaptations of the International Telecommunications Union's Guidelines for International Signalling Point Codes and International Mobile subscriber Identifiers. C&WJ's request for changes or clarification on these Guidelines, in its response to the Consultative Document were, not materially significant, entirely editorial, and do not relate to the issues raised in their request for reconsideration of the determination notice.

3.50 Cable & Wireless Jamaica advanced the following argument to support its claim that the Office failed to consider the requirement of *Paragraph (e)*:

"In its Consultative Document on the Jamaican National Numbering Plan dated May 2002, the OUR stated 'The proposed reallocations mean that codes currently assigned to some services will need to change, but this should 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.' In a competitive environment, where customers are forced to make a choice between services, and service providers, there is no guarantee that they will choose to remain with their original service or service provider. This is not only relevant to the customers in the competitive mobile market, but for those in the geographic market.

In circumstances where the change affects numbers assigned to C&WJ then the company would be at a competitive disadvantage. This is not in accordance with the intention of the statute of "fair" competition."

3.51 The foregoing is a valid proposition in an appeal against unfair competition, whether real or perceived. Any concern therefore on the part of a service provider over the possibility of being affected by such circumstances as described therein is, for the Office, a material consideration as it relates to the matter of the development of the National Numbering Plan. The Office's treatment of such concerns, however, has to be guided by the likelihood of the above-mentioned adverse outcomes.

- 3.52 The essential issues in question here, as the Office interprets C&WJ's assertion, are: (1) the prospective change of C&WJ-assigned telephone numbers, consequent on the migration of legacy service allocations to new and appropriately designated numbering spaces in the National Numbering Plan. (2) Whether such number changes will "force" the affected customers to switch their service or service provider, with C&WJ being placed at a competitive disadvantage. In context, a probable switching of "service" most likely would be, from Mobile to Fixed Line or vice versa. The switching of service provider would be, from C&WJ to a competing Mobile or Fixed Line service provider.
- 3.53 The likelihood of the above-mentioned adverse customer response may be assessed in the context of the following questions:

What advantage or benefit could a customer reasonably expect from switching his/her service or service provider and, paradoxically, in the process undergo a telephone number change, simply or purely because of a (necessary) change of his/her original number at the direction of the regulatory authority?

Is it reasonable to contemplate a significant number of C&WJ's customers making such a decision, except for some extreme or remote justification?

In what sense, in the context of the number changes, might C&WJ's customers consider themselves or be considered "*...forced to make a choice between services, and service providers*"?

- 3.54 The Office is not cognizant of any significant adverse customer reactions to telephone number changes in the local industry. Nor is the Office aware of such occurrences in far more advanced markets where number changes have taken place on much larger scales; the discussion on the UK and Australia cases later in this document provides supporting reference.
- 3.55 The following quotation from "**The Design and Management of Numbering Systems**" (Milne, 2001), provides an answer to the question: what are customer requirements of numbering plans?

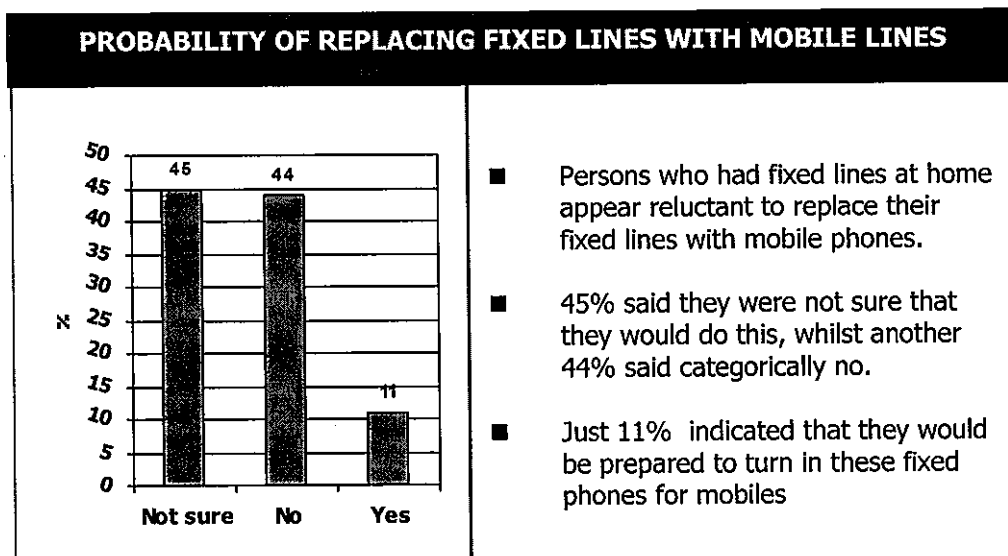
"...qualitative cost-benefit analysis of numbering scheme options shows that user interests usually dominates a "national interest" equation. ...

Perhaps surprisingly, given the great economic importance of user factors in the design of numbering schemes, few systematic research results on the subject are available. However, those that exist are generally consistent. The comments below are based on fieldwork in the UK by Ovum Ltd (a consultancy specialising in numbering studies), the regulator OFTEL, and the TUA [Telecommunications Users Association] and TMA [Telecommunications Managers Association] user organisations; by the regulator Austel and the PTO Telstra in Australia; and by Ovum in Hong Kong and the European Union.

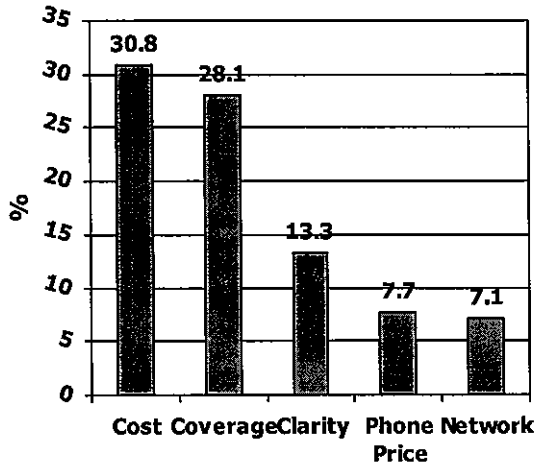
Users consistently value numbers:

- **For making calls correctly** – This means that numbers should be easy to remember or find, and reproduce accurately, pointing to infrequent changes...
- **For receiving calls correctly** – This means that numbers should not readily be misdialled from other much-called numbers, and should change infrequently...
- **For deciding whether to make a call** – This means that codes should give easily recognisable wanted information (e.g., on likely call cost, or on location of the called party). Users are rarely interested in the identity of the network operator, and do not want this information in the number.”

3.56 Following are extracts from the OUR’s Fixed and Mobile Subscriber Survey, conducted between December 2003 and January 2004, which sought to identify and evaluate the factors that influence telecoms subscribers decisions in their choices of services and service providers.



FACTORS THAT CONDITION DECISIONS RE MOBILE PROVIDER



- Cost of calls is the single largest factor taken into consideration when decisions are to be made about a mobile provider.
- Over 30% indicate that this is the deciding factor.
- The coverage of the service is also seen as a key element in decision making, with over 28% confirming this.
- 13.3% say that the clarity they receive is an important element in choice.
- Other important factors include phone price and the network features offered.

FACTORS CONSIDERED WHEN DECIDING ON SERVICE PROVIDER

	%
■ Cost of making calls	66.7
■ Coverage of the service	60.8
■ Clarity of the service	48.9
■ Prices of phones sold	32.4
■ Network features offered	28.6
■ Types of phones sold	21.4
■ Cost of calling others	17.5
■ Technology used	13.5
■ Recommendation from friends/family	12.7
■ Accessibility of outlets	10.5
■ Other things	7.0

3.57 The survey/studies show convincingly that cost and quality (including availability) of service are by far the major reasons for customers' choices of services and service providers. The fieldwork in Europe, Australia, etc, strongly suggests that subscribers are not averse to number changes, provided they are infrequent - the Jamaican Subscriber Survey referenced here, also alludes to this fact.

- 3.58 In the Office's judgement therefore, the probability or likelihood that C&WJ's customers will be so affected by the prospective number changes as to cause them to switch or terminate their services is negligible.
- 3.59 The number changes apply to C&WJ alone, for no reason other than the fact that the company is the holder of all the affected numbering resources and, at the same time, and without causal connection, the numbering plan reallocation requirements necessitates service/customer migration in relation to those same resources. All other number assignees have all their telephone number assignments in the appropriate allocation categories. A situation does not exist therefore where the required number changes apply to other operators similarly as with C&WJ, and the migration requirement is unjustly or prejudicially, imposed on C&WJ only.
- 3.60 Given the present market realities, it is reasonable to conclude that any likelihood, at this time, of C&WJ being placed "*at a competitive disadvantage*" because of changes to the telephone numbers of its customers, could only be in relation to its mobile operations. The mobile customers that are likely to be affected, currently are spread over six 9XX codes with just over 24% utilization as at August 2, 2004, and two 7XX codes at roughly full capacity. Further information on these number ranges is provided later in this document.
- 3.61 It is possible, however, to limit the changes to the 9XX telephone numbers to include:
1. just the first 3 digits (or central office code) or,
 2. just the first 2 digits - from 99, 90 and 91
- 3.62 The Office's conclusion on this issue, thus, is that there is not sufficient evidence to persuade it that the prospective telephone number changes will significantly harm C&WJ's competitive position.
- 3.63 As a final rejoinder to C&WJ's latter assertion, the Office presents an extract from a presentation, entitled "**Administering Fair Competition in Telecommunications**", by the Executive Director of the Fair Trading Commission, at the OUR's Telecommunications Forum held at the Jamaica Conference Centre on July 26 to 27, 2001:

SOME CHALLENGES IN ADMINISTERING FAIR COMPETITION IN THE TELECOMMUNICATIONS INDUSTRY

1. Policy Framework

- (i) Policies that treat competitors differently can bias customers' choices and distort entry and investment decisions.*

- *Policies must therefore provide competitors with an opportunity to compete, but should not attempt to guarantee their success.*

- *Policies should promote and protect competition; not protect from competition.*

- 3.64** Paragraphs (f) and (g), if incorrectly interpreted and applied, could thwart the overall objective to be achieved through section 8 (3) and therefore, require careful and objective consideration. In section 8 (3) the words “*the Office shall*”, in respect of paragraphs (a) to (g), impose a duty or mandate an outcome. The application of paragraphs (a) to (e) is unconditional. The wording of the clearly stated functions in these paragraphs, suggest that the legislature intended to impose an imperative duty in respect of those clauses. However, the application of paragraphs (f) and (g), is, at one and the same time, conditional and discretionary, clearly suggesting that the legislature intended to give discretionary powers in relation to these.
- 3.65** The application of paragraphs (f) and (g), is conditional, as expressed in the words “*...and subject to paragraphs (a) to (e) [or] (f)*”, in the sense that such application must be consistent with, and not inhibit the satisfaction of, the requirements of paragraphs (a) to (e), and also paragraph (f) in relation to the application of paragraph (g). In short, it must not offend the statute.
- 3.66** The application of paragraphs (f) and (g) is discretionary in the sense that it involves an element of judgement on the part of the Office. With respect to paragraph (f), the Office is required to decide what, in general terms, should be the level and nature of costs, if any, to be borne by customers because of changes in the Numbering Plan. Critical to such decision-making is the appropriate interpretation of the phrase “*as far as possible*”.
- 3.67** As regards paragraph (g), the Office’s duty is to determine the extent to which C&WJ’s system of numbering services may be incorporated in a new Numbering Plan, and to decide whether there is a justifiable need to reclaim any of the numbers that were assigned to C&WJ immediately before the effective date of the Act. Such decisions will turn on the interpretation of the word “*reasonable*”.
- 3.68** It stands to reason therefore, that the Office will be contravening its statutory remit in section 8(3) of the Act by failing to exercise its own discretion and independent judgment.

Paragraph (f) - “*...as far as possible and subject to paragraphs (a) to (e), avoid the imposition of costs on customers as a result of changes in the numbering system*”:

- 3.69** The Office repeats the caution given in paragraph 6.7 of the Determination Notice that the tendency to cite paragraphs (f) and (g) for support, without due regard for the conditional paragraphs, must be avoided.

The paramount aim in paragraphs (b) to (e), undoubtedly, is to ensure that the numbering plan is developed and managed for the overall national good. Without a doubt, the statutory language speaks not just to a discrete part, but rather to the whole of the regulatory burden, the obligations in each of paragraphs (f) and (g) impose.

- 3.70 It is the view of the Office that it is not the intent or purpose behind *paragraph (f)* to impose a partial or conditional prohibition on number changes. Rather, the statute, essentially, obligates the Office, in its development of the National Numbering Plan, initially, and subsequently, to take care that costs or inconvenience to customers are objectively justified and kept to the minimum consistent with meeting demands for numbers and sound management of the Numbering Plan.
- 3.71 The accounts, in the earlier sections of this document, of the Office's adherence to paragraphs (a) to (e) clearly indicate that these mandatory conditions have been appropriately applied or satisfied, as the case may be, in the formulation of the National Numbering Plan. Importantly, only those numbering changes that are necessary (fulfilling primarily, the requirements of paragraphs (b) and (c)) to implement the reorganized/reallocated National Numbering Plan have been prescribed by the Office. C&WJ will incur some costs in the reallocation of numbering resources, but these should not necessitate cost recovery from the company's customers. Also, as the Office stated in paragraph 5.10 of the Consultative Document, it is reasonable to assume that code and number changes on [large] scales, appropriately planned and managed, will not be onerous to the public.
- 3.72 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. The service/number migration plan outlined in the Determination Notice is intended to minimize the cost impact on customers.
- 3.73 Putting the matter in perspective, the Office affirms that cost to customers is, in law, a material consideration in the development of the National Numbering Plan; and it is for the Office as the decision-maker in this sphere to determine what weight to attach to such consideration in any relevant particular circumstance.
- 3.74 In connection with paragraph (f), C&WJ contends that:

"The social upheaval (OUR underline for emphasis) from widespread number changes perhaps cannot be quantified. The cost to business interests varies between industries. C&WJ restates from its response to the Consultative Document, dated June 28, 2002, a non-exhaustive list of costs to businesses from the relocation of numbers:

- *Loss of business*
- *Stationery, signage and advertising material reprint and possibly direct mail to customers, locally and overseas.*

The effect on customers who advertise overseas is highlighted in the case of the relocation of geographic customers in St. Ann, where many businesses are involved in the tourist sector.

- *Alarm monitoring companies, if affected, will have to reprogrammed dialling device located on their customers' premises. They are open to liability if not done.*
- *Users of point of sale terminals and other devices that automatically dial pre-programmed numbers will be required to individually reprogramme some units.*
- *Lack of call completion.*
- *Lowered value of printed directory."*

3.75 The expression of concern for such probable outcomes from telephone number changes, as above, is not uncommon, and warrants careful consideration. Nevertheless, this has not precluded large-scale number changes in many jurisdictions. The key to success in these cases has been the time-honoured principle: **careful planning and timing, coupled with sound public education**. The Office draws attention to the experiences of the UK and Australia in the following accounts.

3.76 The success of number changes, and the scale on which these were undertaken, in the UK (On 'PhONEday' – April 16 1995 - the change involved adding a "1" after the leading zero in national area codes. On April 22, 2000, the change, dubbed Big Number Change, was more complex, with local numbers changing along with area/city codes and affecting over 10 million residential and business numbers) is a clear testimony that necessary number changes, virtually on any scale, can be implemented satisfactorily with careful planning and management.

3.77 To minimize customer inconvenience and disruption, the regulator Oftel (now Ofcom) followed, where possible, three principles:

- At least 3 years' notice of any change;
- Permissive dialling period of at least one year for old and new numbers;
- Changed Number Announcements for at least one year after the change had been effected

3.78 These steps allowed time for customers, particularly businesses, to plan for changes to their livery, signage, stationery, etc.

3.79 Similar large-scale number changes which were achieved through careful planning and industry cooperation are cited below from a 1997 press release by the Australian Communications Authority (ACA); the release is reproduced in part from the ACA's website - <http://www.aca.gov.au/> (now Australian Communications and Media Authority (ACMA - <http://www.acma.gov.au/>)):

“On 9 November over 880,000 West Australian residents and businesses, move to a mandatory eight-digit local number and a two-digit area code.

On 5 May this year, phone and fax numbers in Western Australia changed to the (08) area code as part of the new Central and West Area Code Region which covers Western Australia, South Australia, Northern Territory and some New South Wales border areas...

Since 5 May this year, it has been possible to dial the new and the old telephone and fax numbers providing affected customers with a six months period to prepare for the cutover on 9 November this year. This period allows business, and residents, time for planning and an opportunity to notify business associates, friends and relatives of the number change...

From 9 November 1997 until 8 February 1998, callers to the old number will hear a recorded voice announcement advising that the number has changed and how to dial the new number.

After 8 February 1998, only the new numbers can be dialled. The Australian Communications Authority's (ACA) Numbering Public Education Program Manager, Ms Marlene Lee, said although the phone numbers have changed, the ACA has taken every measure to ensure that residents and businesses do not lose contact with friends, relatives or customers.

"We have written to all customers in the area who are affected explaining the changes to their telephone and fax numbers. The ACA has supported the move to 8-digits in Western Australia with advertising, public relations, a direct contact program and direct mail. Research consistently demonstrates almost 100 per cent awareness and more than 90 per cent comprehension of the move to 8-digit numbers nationally," she said."

3.80 Also from the ACA:

"On 3 August 1997 more than 195,000 regional South Australian residents and businesses, previously covered by (08x) area codes, move to an eight-digit local number and a two-digit area code

On 3 February this year, phone and fax numbers in regional South Australia changed to the (08) area code as part of the new Central and West Area Code Region which covers South Australia, Western Australia, Northern Territory and some NewSouth Wales border areas....

Since 3 February this year, it has been possible to dial the new and the old telephone and fax numbers providing affected customers with a six months period to prepare for the cutover on 3 August this year. This period allows business, and residents, time for planning and an opportunity to notify business associates, friends and relatives of the number change. This period of dual access is now coming to an end.

From 3 August 1997 until 2 November 1997, callers to the old number will hear a recorded voice announcement advising that the number has changed and how to dial the new number. After 2 November, only the new numbers can be dialled... ”

3.81 The following are examples of the changes:

In Perth ----- (09) 205 7361 became (08) 9205 7361
 In Regional Western Australia ----- (091) 26 9216 became (08) 9126 9216

In Regional South Australia (Affecting 195,000 residents and businesses):

From	To
(0848) 21xxx	(08) 8553 4xxx
(0848) 22xxx	(08) 8553 2xxx
(0848) 24xxx	(08) 8553 0xxx
“ “	“ “
(0848) 93xxx	(08) 8559 3xxx
(0848) 94xxx	(08) 8559 4xxx
“ ”	“ ”
(085) xx xxxx	(08) 85xx xxxx
(086) xx xxxx	(08) 86xx xxxx
“ ”	“ ”

() = Area Code

3.82 It is important to note that the permissive dialling period for concurrent use of the new and the old telephone numbers, in Australia was only six (6) months in both cases.

3.83 As stated, in part, in the Determination Notice, and elsewhere, it is reasonable to expect that the reallocation of number ranges and the migration process due to the consequent number changes will have some cost impact on service provider and end-users, and the Office agrees that any migration plan will have to take into account these costs.

3.84 With that view in mind, the Office prescribed what it considered appropriate measures to facilitate the migration of services and to mitigate costs to customers. Measures included were as follows:

- No number changes to be made before ...*(date to be revised)*... to allow the industry time to plan for such change
- Customers who will be affected by number changes to be given at least one year’s notice. This is especially necessary for large business customers.
- Affected customers to be advised of their new numbers at the beginning of the notification period

- Permissive dialling of old and new numbers for at least (*period to be revised*) after the activation of the new number
- Old numbers to be aged for 90 days after the period of permissive dialling during which time **“changed number” announcement is to be applied**, where appropriate, in the case of business numbers.

3.85 The Office suggests the following, based on the foregoing migration measures, as realistic, practical and straightforward cost mitigation solutions to the problems that C&WJ considers likely to result from changes to its numbers. With regard to:

Printed directory: The assignment of new numbers and the implementation of permissive dialling for old and new numbers could be scheduled to coincide appropriately with telephone directory publication. The customer information section of the directory published at that time would include a notice on the number changes, which would be published in next directory. Mobile telephone numbers currently are not published in the directories in question.

Point of sale terminals and other devices that automatically dial pre-programmed numbers: With permissive dialling of old and new numbers implemented, the reprogramming of such equipment may be done at the owners or users’ convenience, within the period for permissive dialling, which will not be less than **one year**. Very importantly, the essential dialling processes are transparent to users of these devices and therefore public knowledge of the associated telephone numbers is not required.

Alarm monitoring companies’ devices located on their customers’ premises: Treatment could be the same as in the case of devices above. The period of permissive dialling allows for a gradual reprogramming business systems and devices. Importantly again, and for the same reason as above, public knowledge of the associated telephone numbers is not required.

Stationery, signage and advertising material: Advanced notification and publicity can facilitate the making of changes in these areas a part of the normal course of business. For instance, businesses normally reorder stationery supplies as a matter of course. Periodic redesign/refresh of advertising material is recommended as part of the regular advertising cycle. Publicity, of course, must be far enough but not too far ahead. Special scheduling arrangements could be considered, on a case-by-case basis, for certain industries but not to the extent of fragmenting the overall regulatory timetable.

Call completion: Permissive dialling of old and new numbers, and recorded announcements are the proven effective standard industry prescription for *“call completion”* (presumed to mean ‘reaching a desired destination’) problems in this context.

3.86 The migration measures are intended to minimise the impact of the changes on stakeholders. Indeed, in paragraph 5.8 of the Consultative Document (and which C&WJ quoted above) the Office noted that the “*changes ... should be done on a phased basis, with the minimum of disruption for customers*”. C&WJ agreed with this phased approach, in its response to the related question in the Consultative document:

“What do you envisage as important implications (e.g. cost, administrative, technical, service) of the proposed code changes?”

In response, C&WJ stated:

“The Company agrees with the OUR that any agreed changes should be implemented on a phased basis...”

3.87 It is important to note here that reasonable number changes, including necessarily, changes that are incidental to regulatory alterations of the Numbering Scheme, are not inconsistent with the existing terms and conditions governing C&WJ’s provision of service to its residential and business customers. The relevant section of those terms and conditions states:

“Customers shall have no proprietary rights in telephone numbers or other numbers or designations assigned to them by the company. The company may make reasonable changes to such numbers and designations and to Central Office assignments provided that it shall give reasonable notice of such changes to customers”

3.88 From time to time, over the years, C&WJ it seems, would have relied on this clause to facilitate the development of its operations and business that entailed mass telephone number changes.

3.89 More importantly, however, the Office has provided substantial evidence from real-world experiences where the potential impact of number changes was several magnitudes greater than any probable outcome in Jamaica today, and has shown by proper inference that any level of number change in Jamaica can be accomplished with minimal customer disruption, through careful planning, management, and sound public education.

3.90 To be sure, the foregoing discussion firmly establishes the fact that the Office has adopted international best practices in its proposed approach to managing the prospective telephone number changes, to minimise customer disruption and costs.

Paragraph (g) - “...to such extent as may be reasonable and subject to paragraphs (a) to (f), preserve the numbering system maintained by the existing telecommunications carrier and the numbering allocations existing immediately before the appointed day”:

- 3.91 The Act does not define the term "reasonable"; nor does it point to a functional standard for reasonableness, and in the absence of such detailed criteria, the concept of reasonableness may not be easy to apply. The legislature should therefore be presumed to have used the term in its ordinary dictionary and contextual meaning.
- 3.92 The meaning of the term "reasonable" in paragraph (g) therefore should be understood in the context of the qualifying paragraphs (a) to (f) and consequently should bear collectively these meanings: **within the bounds of common sense; moderate (i.e., avoiding extremes); fair; objective.**
- 3.93 In this connection, paragraph (g) may be read, by way of interpretation, "*preserve the [existing] numbering system... and number allocations... but only to an extent that may be considered reasonable and is not in violation of paragraphs (a) to (f)*". The preservation of the existing numbering system and number allocations, in the opinion of the Office, is therefore not an absolute requirement.
- 3.94 Thus, in accordance with paragraph (c), Mobile numbers should not be retained in designated and agreed Geographic ranges, nor Geographic numbers in Mobile ranges; this distorts information as to the type and, by extension, cost of calls associated with the numbers. The potential risks in retaining these assignments are even greater than readily apparent, as explained below.
- 3.95 Very importantly, and as mentioned in the discussion on *Paragraph (b)*, the OUR's number allocation scheme is largely consistent with C&WJ's "876 NPA AREA CODE PLAN", dated October 18, 2001, which C&WJ presented to the Office as its existing number allocation scheme. The following table illustrates:

NXX CODES	C&WJ ALLOCATIONS LEGACY ARRANGEMENTS	OUR ALLOCATIONS NATIONAL NUMBERING PLAN
N00	Reserved (8 Codes; 1 to Cellular)	Special Services
N11	Reserved (8 codes; 1 to S/Services)	Access Codes (Public Interest)
YYY	(7codes. Part of respective NXXs)	Special Services
1XX	Access Codes	Access Codes
2XX	Growth	Growth
3XX	Cellular (Mobile)	Mobile
4XX	Growth	Growth (** Subsequently Mobile)
50X-54X	DID/Special Services (50 NXXs)	Growth (* Subsequently Mobile)
55X-59X	POTS (Geographic)	Geographic
6XX	POTS (Geographic)	Geographic
70X-76X	POTS(Geographic; 5% Cellular)	Geographic
77X-79X	Cellular (Mobile; 10% POTS)	Mobile
8XX	Cellular (Mobile)	Mobile
9XX	POTS (Geographic; 6% cellular)	Geographic
976	Special Services	Special Services

* = 60% already assigned to Mobile operators including C&WJ
** = 90% already assigned to Mobile Operators (the one remaining NXX to be reclaimed from holder)

3.96 In its response to the Consultative Document, C&WJ states:

“C&WJ again advises the OUR of the reduced ability of its customers, and particularly fixed line customers to manage their call charges when an NXX bloc is used jointly. This is due to the high call termination charges levied by Digicel and the fact that customers are accustomed to C&WJ being in certain blocs, such as 8XX. Joint use has resulted in confusion for the customer and high call charges. Knowing that C&WJ is assigned the entire 8XX NXX provides customer with the information that the termination charges are lower than those imposed by Digicel. Customers display a high level of uncertainty with joint use of an NXX blocs, not being sure which provider is assigned which codes in the bloc range. If it were that mobile

termination rates were the same, then the fact that the customer knows that he or she is calling a mobile number would be sufficient information, but with disparate termination rates, a disservice is done to the customer, because he or she is unable to determine the cost of the call”.

- 3.97** This matter was the subject of an intense public debate which was shortly assuaged by the OUR’s public explanation of the grave implications of exclusive service provider identification by numbers (service provider branding) that, seemingly, was the main pursuit in this matter.
- 3.98** A very important consideration is rendered all the more relevant by C&WJ’s preceding statement. With C&WJ’s having Mobile and Geographic numbers embedded in a well-known Geographic and Mobile ranges, respectively, the (same) problems of “*reduced ability of its customers, and particularly fixed line customers to manage their call charges..., confusion for the customer..., high call charges*”, (as identified in the case above), will be present because of the differences in tariffs. The result of this is that a “*...disservice is done to the customer, because he or she is unable to determine the cost of the call[s]*”.
- 3.99** Section 8(3) (c) of the Act seeks to prevent such problems. Indeed, this opens the door for claims that C&WJ is afforded an unfair competitive advantage where, for example, it uniquely has Mobile numbers embedded in the 9XX and 70X-76X geographic ranges. Unknowing callers, it might be claimed, could well mistake such Mobile numbers for fixed line numbers and make a call at a higher than expected rate even when there is the choice of a cheaper alternative. Such competitive advantage increases in a situation where the Mobile and Fixed service provider are one entity.
- 3.100** Furthering the discussion, there is no question that VoIP-in-the-local-loop has triggered a **resurgence of growth in the Fixed Line market** globally. Voice is still the key communications service, and is driving uptake in the residential broadband market. Broadband access, with its attendant benefits, is rapidly driving competition in Local Loop Unbundling in telecoms markets around the world. These trends were certainly a global concern in 2002, and more so since then.
- 3.101** A serious Question arises therefore as to whether allowing C&WJ to retain a mix of services in singly-allocated number ranges could be construed as grounds for competing carriers to appeal on the basis of paragraph 8(3) (e) of the Telecoms Act and the fair competition statute, to have their Mobile and Fixed services commonly accommodated in number ranges. Carriers may desire this perhaps, to avail themselves of the ‘advantages’ (which, however, are disadvantageous to customers) alluded to in paragraph 3.99.
- 3.102** It is the opinion of the Office therefore that the discretionary nature of paragraph 8(3) (g) provides for the Office to proactively avert such potentially disruptive situations. In this context, it is reasonable to conclude also that the legislature, in considering the question

of retention of legacy number allocations in a new National Numbering Plan, was mindful of potential pitfalls in maintaining the *status quo*.

3.103 This again can be construed as justification for the migration of Mobile services from Geographic number ranges and Geographic services from Mobile ranges.

3.104 Also, it would be a colossal waste of numbering resources, to retain an allocation of half a million numbers (that is, the 50X-54X range, which is more than C&WJ's total fixed line customer base) for special services. This is in keeping with paragraph (d), and based on standard number conservation principles, the capacity of the existing national numbering space and the relatively limited requirements for numbering resources for Special Services compared with basic or regular services. Besides, as emphasised before, the related numbering space is required for an orderly and systematic expansion of allocations for Mobile services, in accordance with standard numbering management practices which dictate that "*good husbandry... allow[s] for growth into adjacent numbering space*" (Milne, 2001).

3.105 In connection with paragraph (g), C&WJ writes (Bolding of text by the OUR, for emphasis):

*"In its Consultative Document, the OUR submitted that its analysis of the current state of Numbering revealed 'the need for proper husbandry and conservation of the numbering resource, 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 demand.' C&WJ submits that these objectives are not met by **the migration of numbers that is inevitable with the changes in number range allocation made by the OUR**. While there is the need for husbandry, Jamaica's 876 NPA is under no threat of exhaustion for the foreseeable future. Thus, all efforts should be made to balance the preservation of scarce resources with the need to **reduce** [note, not 'eliminate', which is unrealistic] **displacement and costs to customers**. In this context the OUR has not conclusively proven the need to migrate these groups of customers; and therefore disrupt this element of the numbering system maintained by the existing telecommunications carrier.*

3.106 In the above statement which C&WJ quoted from the OUR's Consultative Document, the Office had identified three important and interrelated numbering requirements in relation to the prevailing state of numbering. These were the need:

1. for proper management and administration of numbering resources;
2. to take care of numbering resources – avoiding and protecting from wasteful allocation, assignment and use, in the various contexts;

3. to store up adequate supplies of numbering resources for future use including satisfying numbering demands from new technological developments and the introduction of new services.
- 3.107** The statement also pointed out the responsibility of the OUR, as the Numbering Administrator, in addressing the identified needs and essentially reflected the Office's mandate under Section 8 of the Act which encapsulates a continuum of development, numbering administration and management activities and criteria that will effectively support the overall development and control of the National Numbering Plan.
- 3.108** In addition, the statement expressed the Office's commitment to make every effort (the meaning in the statement of the phrase "as far as possible"), through appropriate number allocations, to accomplish the specified objectives without undue (i.e., excessive or disproportionate) costs to customers - as required by paragraph (f). The stated objectives are (1) broad service/cost indications to customers when they are placing a call; (2) promote effective competition; (3) safeguard [by reservation and efficient use] supplies to meet future demands.
- 3.109** Clearly, in fulfilling these objectives through number allocations, the Office necessarily would have to consider C&WJ's legacy allocations to determine, as paragraph (g) provides, whether such allocations should be changed or retained. These critical objectives and decisions are not mutually exclusive; on the contrary, the Act requires that they be reconciled.
- 3.110** There is obvious difficulty to reconcile C&WJ positions in this matter. In its response to the Consultative Document, C&WJ did not express disagreement with the allocations in question here, and agreed with the aforementioned objectives, which were presented in the consultation as number allocation criteria. In the statement above, C&WJ implicitly accedes that "*the migration of numbers ...is inevitable with the [changes in number range] allocations made by the OUR*". Yet C&WJ asserts that the "*objectives are not met by the migration of numbers*".
- 3.111** The tenor of C&WJ's arguments, including the latter above, in support of its petition for reconsideration of the Determination Notice, is that the Office has acted contrary to the Act in the development of the Numbering Plan, and consequently caused the migration/change of numbers.
- 3.112** However, it is clear from the earlier discussions that the legislature never intended that there was to be a complete prohibition on number changes consequently to the development of a numbering plan for Jamaica. The directives in paragraphs (f) and (g), to exercise careful consideration and reasonableness in arriving at the associated numbering decisions, based on the principle of minimising disruption customers, and the conditional linking, nevertheless, of such decisions to the development of a coherent and equitable numbering structure based on the criteria summarised in paragraphs (a) to (e), attest to this fact.

3.113 To be sure, the Office did not to mandate customer migration to the extent it considers ideal, if not necessary, as explained in paragraph 3.114 (1) while being careful not to contravene the requirements of Section 8 (3) (a) – (f) of the Act. Again, the basis of this decision is “*the need to reduce displacement and costs to customers*”.

3.114 The itemised discussions below provide evidence of the Office’s practical application of ‘reasonableness’, as defined earlier, in its consideration of C&WJ numbering arrangements that were in place before the inception of the Act. They also provide sufficient justification for the reclamation of specified numbering resources:

- (1.) C&WJ’s allocation of CO codes in the 6XX, and 70X-76X number ranges among the 14 parishes, in blocks of 100,000 numbers, and the subsequent assignment of individual codes (as illustrated in figure 1), during the period when the company controlled the assignment of numbers to itself, now presents a problem of inefficiency. As mentioned earlier, this makes it impossible to separate carriers and services providers, at a minimum, in blocks of 100,000 numbers in the two number ranges, as currently done in the Mobile ranges, or to orderly group those carrier and service providers needing only small supplies of numbers. It is an accepted principle that the quantity of numbers assigned to each operator should correspond to its share in the market and that allocation arrangements should take place in an equitable and sensible manner.

Figure 1 C&WJ’s 6XX and 70X-76X Allocations by Parish


NX	ALLOCATION	X									
		0	1	2	3	4	5	6	7	8	9
60	Spare (Cornwall)		■	■	■		■		■		■
61	CO Code Trelawny	■		■						■	
62	CO Code Manchester					■	■				
63	CO Code St. Elizabeth					■					
64	CO Code Westmoreland	■									
65	CO Code Clarendon	■									
66	Single Number Service				■						
67	CO Code St. Ann	■						■			
68	CO Code St. James	■				■					
69	CO Code Hanover					■					
70	Spare (Surrey)		■	■	■	■	■	■	■		■
71	CO Code Portland						■				
72	CO Code St. Mary					■	■	■			
73	CO Code St. Thomas				■	■					
74	CO Code St. Catherine	■					■	■		■	■
75	CO Code Kingston & St. Andrew	■				■	■	■	■	■	■
76	CO Code Kingston & St. Andrew					■	■				

■ Allocated Codes

Ideally, a reallocation of codes in these 6XX and 7XX blocks would be the prudent thing to do. This, optimally, would concentrate the CO codes currently assigned to C&WJ, in 5 blocks of 100,000 numbers each, and thereby, make available 12 contiguous blocks of 100,000 numbers each – a total of 1.2 million numbers - for efficient and orderly industry-wide allocations, as shown in figure 2.

Figure 2 – Example of an optimally efficient reallocation of the 6XX and 7XX number ranges






NX	ALLOCATION	X									
		0	1	2	3	4	5	6	7	8	9
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72	C&WJ current allocations										
73	C&WJ current allocations										
74	C&WJ current allocations										
75	C&WJ current allocations										
76	C&WJ current allocations										


 Allocated Codes

C&WJ’s number utilization report dated August 22, 2002 showed that this current ‘allocation’ of 460,000 numbers (the two Mobile Codes excluded) was less than 20% utilized. The Office allowed the ‘allocations’ to remain as shown in figure 1 in order to “...reduce displacement and costs to customers” and not “...disrupt this element of the numbering system maintained by the existing telecommunications carrier”.

- (2.) Figure 3 shows the ‘allocation’ of CO codes to C&WJ in the 77X – 79 X number range as presented in the company’s number utilization report dated August 22, 2002.

Figure 3 – Mobile and geographic Code Assignments for C&WJ in the 77X-79X number Range

NX	ALLOCATION	(X) 0										
			1	2	3	4	5	6	7	8	9	
77	C&WJ current	Cell	Cell	Cell	Cell	Cell	Cell	Cell	Cell	Cell	Cell	Cell
78	C&WJ current	 OPMs	Cell	Cell	Cell	Cell	 CHH	 MYPN	Cell	Cell	Cell	Cell
79	C&WJ current	Cell	Cell	Cell	Cell	 MNEG	 OCHO	Cell	Cell	Cell	Cell	Cell

 Geographic Codes

The Office, in its consideration of "...this element of the numbering system maintained by the existing telecommunications carrier", commented as follows in the Consultative Document:

3.9 *The wireless resources currently are 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.*

In response to the consultation question: "**Should the 77X – 79X ranges be transferred to the cellular range**", C&WJ said:

*"Yes. C&WJ strongly recommends that the 77X – 79X be kept in the cellular range. Currently C&WJ is using twenty-five (25) of the thirty (30) NXX in the range for mobile service. **It is much easier to remove the customers in the five (5) remaining ranges (NXXs) which are assigned to POTS services** (Text bolded by the OUR for emphasis; see OUR conclusions on page 39). This is in keeping with Section 8(3)(f) of the Telecommunications Act 2000..."*

The second part of this statement was not a mere hypothetical assent to migration of numbers; rather, it was an implicit recommendation. C&WJ was recommending here, a preferred number migration alternative, one that was of the nature of, but of a lesser impact than, the course of action proposed by the Office. Both recommendations by C&WJ were accommodated in Determinations 3.4 and 6.1 respectively.

In a similar vein, Determination 6.1 required the transfer of six (6) Mobile codes from the 9XX range. Currently C&WJ is using eighty-five (85) of the one hundred (100) NXXs in the 9XX range, for Geographic services. Figure 4 shows that the 6 Mobile codes were less 24% utilized at December 6, 2003.

Figure 4 - Mobile Code and Number Assignments in the 9XX Number Range as at December 6, 2003

NXX	WORKING	CAPACITY	% UTILIZATION
909	2,106	10,000	21.06
919	1,927	10,000	19.27
990	2,268	10,000	22.68
995	2,426	10,000	24.26
997	3,298	10,000	32.98
999	2,344	10,000	23.44
TOTAL	14,369	60,000	23.94

Regarding these legacy allocations, the Office stated the following in the Consultative Document:

- 3.6 ... 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... 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 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.

The Office took a compromise approach in terms of the migration plan set out in Determination 7.2, which set only minimum notification times for number change and the permissive dialling period, in the interest of both service provider and customers. The final decision on time lines was left open for discussion with C&WJ as provided in Determination 7.1.

Referring to its statement quoted in paragraph 3.105 of this document, C&WJ says:

“In the context of this argument, C&WJ submits that the determination of 7.1 and 7.2 outlining future consultations and a migration strategy are premature”.

This latter statement and the discussion that follows here, reveal further contradictions between the positions C&WJ adopted in its response to the Consultative Document, and the company’s call for reconsideration of the Determinations.

To the question:

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?

C&WJ replied:

“C&WJ recommends that the Company be allowed by the OUR to consider and document all the steps and resources necessary on its part to implement the agreed changes, using a timeline. Based on this project document submitted by the Company and negotiations with the OUR, a time frame is agreed and a final project document submitted and the plan implemented...”

Further and very importantly, the Company intends to use churn and attrition as a fundamental migration strategy to reduce (underline inserted by the OUR) the need to transfer any customers to new number ranges. Once a customer has churned, the number will be aged and not reassigned; in this way the Company can progress to the complete vacation of some number ranges, within a few years, without having to uproot customers”.

The first part of C&WJ’s recommendation above was effectively accommodated in **Determination 7.1**, which states:

“The Office will convene a meeting with Cable and Wireless Jamaica ...to discuss the details of the transition plan. The issues to be discussed will include, but not limited to, the services to be migrated and the NXXs affected; the customers that will be affected and the likely impact on both the customers and the company; methods of public notification; time lines; progress reporting”.

However, in paragraphs 7.2 and 7.3 of the Determination Notice, the Office explained its objection to C&WJ’s basic “churn and attrition” approach as follows:

7.2 C&WJ's "churn and attrition" method of migration is undoubtedly the least disruptive approach but clearly one that could serve to delay indefinitely the migration process, or fossilize the old system of number allocation. The use of normal customer churn as a migration method is a practical solution only where the average life of a telephone number is short with respect to the time frame suggested in the Consultative Document for completion of the migration process (less than 3 years). Otherwise, at best, it would mean setting an excessive time limit for "forced" migration. [The] time limit [has] to be greater than the average life of a telephone number.

7.3 It needs to be emphasised here that making the "churn and attrition" method of service migration a standard could frustrate future efforts to rationalise the Jamaican numbering space.

Determination 7.2 prescribes measures to facilitate telephone number changes and the migration of services to their designated numbering spaces in the National Numbering Plan. C&WJ will have an opportunity to discuss these, and others to meet its particular circumstances as provided in Determination 7.1. These, however, set minimum customer notification and number availability conditions, in favour of both service provider and customers and reflect, overall, the basic standard industry requisites for implementing number changes with or without service migration. C&WJ's proposed "churn and attrition" migration strategy would necessarily include four of the eight measures. That the Office adopts these measures at this stage cannot, therefore, be considered "premature", as C&WJ submitted. The measures are as follows:

- Discontinuation of number assignments in number ranges marked for service migration.
- All new resource assignments to be made in the ranges specified for the respective service being provided.
- Numbers not in their designated categories, to be frozen for reclamation and reallocation.
- No number changes to be made before ...(date)... to allow the industry time plan for such changes
- Customers to be affected by number changes to be given no less than one year's notice. This is especially necessary for large 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 no less than 90 days
- Old numbers to be aged (or quarantined) for 90 days during which time “changed number” announcement should be applied, where practicable, in the case of business numbers.

It is clear from the company’s various responses to the Consultative Document that C&WJ:

- agreed that the changes should be implemented, and on a phased basis; *however, it*
- preferred to use “churn and attrition” as its fundamental (i.e., ‘primary’ and not ‘sole’) migration strategy, *and also*
- implicitly suggested that some numbers would be changed by direct migration *thereby demonstrating that the company*
- was not altogether unwilling to make the changes, *and therefore,*
- was willing to discuss implementation strategies with the Office. *It is reasonable to conclude therefore, that C&WJ*
- agreed, implicitly, that the changes are appropriate and necessary.

- (3.) C&WJ, when it assumed the role of numbering administrator in Jamaica, assigned the N11 code ‘511’ for Direct Inward Dialling (DID) services despite the common understanding throughout the NANP (although there are no industry guidelines for the assignment of N11 codes) that N11 codes, are classified as service codes and are **not used as CO codes**. As stated on the NANPA website:

“N11 codes, more formally known as service codes, are used to provide three-digit dialling access to special services” (www.nanpa.com).

The following statement on the website of the Federal Communications Commission (FCC) confirms the classification, and underscores the importance and value of N11 codes:

*“Among **abbreviated dialling arrangements**, N11 codes are three-digit codes of which the first digit can be any digit other than 1 or 0, and the last two digits are both one. There are only eight possible N11 codes, making N11 codes among the scarcest of numbering resources”*
(www.fcc.gov/Bureaus/Common_Carrier/News_Releases)

The following statement is published in a North American Numbering Council (NANC) September 2003 report entitled “Report and Recommendation of the Abbreviated Dialling For One Call Notification Issue Management Group”

“The N11 architecture is an established abbreviated dialling plan, recognized by both switch manufacturers and the public at large”

In 1992, the Canadian Steering Committee on Numbering established criteria for the use of unassigned N11 numbers in Canada, making their application, to the extent practical, consistent with the rest of the NANP area. The codes were to be “designated primarily for basic, or adjunct-to-basic, telecommunications services of a universal social value rather than for commercial use by certain industry segments” (<http://www.cnac.ca/numres/n11/n11.htm>)

In 2001, the Canadian Radio-Television and Telecommunications Commission (CRTC), after consultation with the Canadian Telecoms industry, and in view of the scarcity of N11 codes, set down new guidelines (Decision CRTC 2001-475) to be used to consider the allocation of N11 codes. In its assessment of the responses to the consultation, the CRTC said:

“...Most commenting parties noted that N11 is a scarce resource and that uniform criteria should serve as the basis for the assignment of unused N11 codes. These parties included Bell Canada, Island Telecom Inc., NewTel Communications Inc., Saskatchewan Telecommunications (collectively, Bell Canada et al.); AT&T Canada Telecom Services Company and AT&T Canada Corp. (collectively, AT&T Canada); TELUS Communications Inc., TELUS Communications (B.C.) Inc., Québec-Téléphone (now known as TELUS Communications (Québec) Inc.) and TELUS Mobility Cellular Inc. (collectively, TELUS). These parties recommended the consistent use of the remaining unassigned N11 codes throughout the NANP.

...The view of AT&T Canada, TELUS, CWTA (representing the Canadian wireless industry), City of Calgary and a number of individuals was that N11 codes should not be assigned to any one organization. N11 should be allocated to a service or purpose that reflects universal social values and serves the broad public interest of Canadians”.

In addition to having marked these codes as “Reserved” in its “876 NPA Area Code Plan” dated October 18, 2001, C&WJ in its response to the Consultative Document was unequivocal in acknowledging this NANP-wide use of N11 codes as demonstrated by the following replies to relevant questions posed by the Office:

- Q. What specific changes to the existing numbering arrangements would you recommend, and what time frames for their implementation?**
- A. *“It is recommended that N11 codes be placed in the ‘public interest’ category”*
- Q. Do you agree that N11 and N00 codes should continue to have ‘Reserved’ status? What in your view would be the most appropriate use for these codes?**

- A. *“C&WJ agrees with the classification of the OUR and the intended use of the codes, that is for special services and public interest”*

* [Digicel’s response to this question was:

“From NANPA practices, N11 or N00 codes are reserved and these should stay this way the most appropriate use should be determined by the office and these should be standard across the networks.”

Digicel’s corporate telephone number is 511-5000]

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

- A. *“C&WJ agrees with the classification. These resources should be allocated according to the express need of each category. The Public Interest category should be accorded priority”*

The 5XX code allocations shown in figure 5 provides evidence that C&WJ was not pressed by necessity to utilize the ‘511’ service code as a central office code. NXXs 501 and 513 could have been used even if it is assumed that all the others were allocated before 511.

Figure 5 - C&WJ 5XX Code Assignments as at August 22, 2002

Reported 5XX Code Assignments for C&WJ as at August 22, 2002												
Code	501	502	510	511	512	513	514	516	518	523	525	563
Capacity	10K	10K	10K	10K	10K	10K	10K	10K	10K	10K	10K	10K
Usage	0	500	10K	10K	6300	0	2400	650	1100	3100	1300	138
Usage (%)	0	5	100	100	63	0	24	6.5	11	31	13	1.3
Service	DID	DID	DID	DID	DID	DID	DID	DID	DID	DID	DID	DID

C&WJ undoubtedly was aware of the restriction on the use of N11 codes but contended, in its response to the Consultative Document, that when *“...Jamaica shared the 809 Numbering Plan Areas (NPA)... Codes were assigned to Jamaica, as with other Caribbean islands, that were available, but not necessarily in conformance with the guidelines for the NANP”* and asked the Office to *“...consider this historical legacy in its Determination on the JNNP”*.

However, the Office has shown conclusively that the North American Numbering Plan Administration who was the administrator for the shared 809 area code for the Caribbean had made no such assignments. It is therefore the opinion of the Office that C&WJ, in its allocation and use of the three-digit special service code ‘511’, knowingly, and without regard for a strictly guarded NANP standard, misappropriated an extremely scarce numbering resource.

Paragraphs (a), (d) and (e) of section 8 (3) therefore provide grounds for the reclamation of the resource, and in accordance with Determination 6.2.

Review of Determinations

- 3.115** Review of the disputed determinations based on the objectives of those determinations, C&WJ's responses to related consultative questions and the relevance of the determination to C&WJ's stated reason for its reconsideration request.

Determination 3.2

- 3.116** Determination 3.2 provides that the Office will avoid service provider branding with numbers. The Office pointed out in paragraph 3.3 of the Determination Notice that telecommunications service providers who desire exclusive identification (branding) by numbers would have to be assigned at least one million numbers, regardless of the size of their operation. Similarly, an service provider who requires one million and one (1,000,001) numbers would have to be assigned two million (2,000,000) numbers, and so on.

- 3.117** The Office stated further, in paragraph 3.4 of the Determination Notice that this mode of operator branding would result in grossly inefficient utilization of numbering resources, and on a scale that would not find favour with the NPA (Area) Code Administrator if Jamaica were to seek an additional area code. Section 6.1.2 of the NPA Allocation Plan and Assignment Guidelines states:

The NPA Code Administrator, together with the industry, may also conduct surveys to determine and/or substantiate the demand for the proposed new service/application for which an NPA code is being requested."

- 3.118** The Office also stated that 'operator branding' would conflict with the aims of Local Number Portability that will allow customers to change service providers while keeping their number(s); lack of number portability is widely regarded as a significant and major barrier to competition. There is therefore no rational basis for a reconsideration of this determination in the context of C&WJ's request.

For the above reasons, the Office reaffirms its decision set out in Determination 3.2.

Determinations 3.3, 3.4 and 3.5

- 3.119** **Determination 3.3** designates the 55X-59X, 6XX, 70X-76X and 9XX ranges as Geographic numbering ranges. More specifically, the Determination formally adopted

and confirmed these existing allocations as features of the Jamaican National Numbering Plan in accordance with the provisions of section 8(3) (g) of the Act. In addition, Determination 3.3 excludes the set of NXXs called Easily Recognizable Codes (ERC) from the above-mentioned Geographic number ranges.

- 3.120** **Determination 3.4** designates the 3XX, 4XX, 8XX and 77X-79X ranges as Mobile numbering ranges. (In the consultative document, the 4XX range was proposed as a range for growth but later was allocated for Mobile services). Besides expanding the mobile allocation space to include the previously reserved 4XX range, the Determination formally adopted and confirmed existing allocations as features of the Jamaican National Numbering Plan and in that regard, fulfilled requirements of section 8(3) (g) of the Act. Additionally, Determination 3.4 excludes the set of NXXs called Easily Recognizable Codes (ERC) from the above-mentioned Mobile number ranges.
- 3.121** With the absence of specifics from C&WJ, and in the best interest of the industry, the Office makes a reasonable inference that C&WJ's concern in respect of Determinations 3.3 and 3.4 is with the exclusion of the ERCs, which currently are assigned to the company as Mobile number ranges, from the Mobile and Geographic ranges. Making this inference also provides a context for the Office to clarify the need for the availability of the ERCs, as done below.
- 3.122** **Determination 3.5** designates NXXs 200, 300, 400, 500, 600, 700, 800, 900, 222, 333, 444, 777, 888, 999 and 976 as Special Services numbering ranges. The Office concludes by inference that NXXs 700, 333, 777 and 999 are the subject of C&WJ's call for reconsideration of Determinations 3.3, 3.4, and 3.5; currently they are assigned to the company's Mobile services, as indicated above. NXX 333 inadvertently was assigned to C&WJ. The company was notified early about the error, with the understanding that steps would have been taken to recover the code. NXX 999 is in a designated geographic range and its current use for Mobile services is not consistent with the numbering principle of allocating of numbers by service category, and the provisions of section 8(3) (c) of the Act.
- 3.123** The YYY codes (222, 333...999) are of paramount importance in the Jamaican National Numbering Plan. They are the most suitable of available codes for the development of the desired system of Short Codes of four or more digits in length that will be suitable for use in both the Public Switched Telephone Network (PSTN) and the Public Land Mobile Network (PLMN) for information and premium services. In the current PSTN, the three leading digits of a Short Code should not be the same as a central office code. The reason is that this presents a costly Number Translation problem - unlike the case of the PLMN, which has no need for inter-digit timeouts to distinguish abbreviated dialling codes from standard 7- or 10-digit numbers since customers press a TALK or SEND key when finished dialling.
- 3.124** As C&WJ opined in its response to the Consultative Document, "...*The demand for Short Codes will come from service providers, who will use Short Codes for... access to a*

proliferation of new services. Also...abbreviated dialling will be considered to be more convenient than dialling all the digits of a regular telephone number”.

Table 3 Status of YYY Codes

YYY CODE	CURRENT USE/STATUS
222	Part of the reserved 2XX number range (the only pristine 876-NXX number block)
333	Assigned to C&WJ Mobile service
444	Local 444 Line Numbers for Mobile text-based services (currently the only available YYY code)
555	NANP 555 Line Numbers (Assignable by the NANP Administrator only)
666	Reserved (unassigned in most NPAs)
777	Assigned to C&WJ Mobile service
888	Assigned to C&WJ Mobile service (Not in use)
999	Assigned to C&WJ Mobile service (currently has a low fill rate)

3.125 The Office may also allocate the N00 and YYY resources as 3-digit codes, or blocks of 10,000 numbers (as in the case of the 444 code), where it considers this to be appropriate, taking into account industry demand, previous allocations and the need to conserve capacity.

For the above reasons, the Office reaffirms its decisions set out in Determinations 3.3, 3.4 and 3.5.

Determination 3.10

3.126 Determination 3.10 designates the 2XX and 50X-54X ranges as numbering ranges for growth, that is, for future expansion of other existing allocation categories or the introduction of new ones. In its response to the Consultation question - **What are your views as to the appropriateness of the proposed resource allocation categories and the corresponding levels of number allocation?** C&WJ did not state any objection to the proposals for these (2XX and 50X-54X) allocations. C&WJ only recommended that the rest of the 5XX range, that is, 55X-59X (also) be reserved for growth, and not be considered for geographic allocation as proposed by the OUR. The closest reference made to the 50X-54X range (2XX is unused) was the following statement in the Introduction to the company’s response to the Consultative Document (text underlined by the OUR for emphasis):

“Reference is also made to the 809 legacy that was inherited by Jamaica. Prior to 1996, Jamaica shared the 809 Numbering Plan Area (NPA) with several other Caribbean islands. Codes were assigned to Jamaica, as with other Caribbean islands, that were available, but not necessarily in conformance with the guidelines for the NANP. C&WJ urges the OUR to consider this historical legacy in its Determination on the JNNP”.

3.127 The Office believes that this statement most likely refers to C&WJ's current use of the **511**, NXX (611 and 911 NXXs are also being used by C&WJ). However, N11 codes were not in use in Jamaica when NANP-based numbers assigned to Jamaica were administered by The North American Numbering Plan Administrator in keeping with the shared 809 NPA (area) code arrangement, that is, before the inception of the 876 area code (see tables 4 below).

Table 4 C&WJ NXX Assignments under NPA 809

CENTRAL OFFICE CODES HELD BY C&WJ AS AT DECEMBER 1996																	
601	609	610	702	703	705	708	709	801	802	803	804	805	816	817	819	901	902
903	904	905	906	907	909	910	912	913	917	918	919	920	921	922	923	924	925
926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	942	943	944
951	952	953	954	955	956	957	960	961	962	963	964	965	966	967	968	969	972
973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999									
CENTRAL OFFICE CODES HELD BY C&WJ AT THE INCEPTION OF NPA 876 ON MAY 1, 1997																	
202	601	602	603	605	607	609	610	702	703	705	706	708	709	801	802	803	804
805	815	816	817	819	901	902	903	904	905	906	907	909	910	912	913	917	918
919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936
937	938	939	940	942	943	944	951	952	953	954	955	956	957	960	961	962	963
964	965	966	967	968	969	972	973	974	975	976	977	978	979	980	981	982	983
984	985	986	987	988	989	990	992	993	994	995	996	997	998	999			

3.128 As C&WJ alluded in the latter quotation, the North American Numbering Plan prohibits the assignment and N11 resources as area codes and central office codes (see paragraphs 4.1.3 and 4.2.1 of the INC NPA Allocation Plan & Assignment Guidelines, and paragraph 4.6 of the INC Central Office Code (NXX) Assignment Guidelines). More was said, in paragraph 3.114 (3), about the use of N11 codes. Suffice it to say here, that contrary to what the company's explanation seemed to be suggesting, C&WJ assigned these codes to itself, and not unavoidably, after it assumed the role of numbering administrator for Jamaica.

3.129 It is important to note that in C&WJ's "876 NPA Area Code Plan", dated October 18, 2001, the entire 50X-54X range – **half a million** numbers – was set aside for DID (Direct Inward Dialling, which allows inward-directed calls to a PBX system to reach a specific PBX extension without human intervention) and Special Services. DID is essentially a POTS service and does not require unique allocation of numbers.

3.130 Three Mobile service providers in the market, and the government's decision for a fourth because of "...the very substantial growth that [had] taken place in mobile telephone

usage, since the decision of the Government to liberalize the telecommunications sector... and since...the market continue(d) to expand (Minister of Commerce Science and Technology) ”, signalled a potential numbering crisis. It was prudent and timely therefore, for the Office to make provision for the potential increases in demand for numbers. The 4XX number range, which was proposed for growth in the Consultative Document, was allocated for Mobile services, and the 50X - 54X range subsequently earmarked for a systematic and logical expansion of the Mobile numbering space and further market growth.

For the above reasons, the Office reaffirms its decision set out in Determination 3.10.

Determinations 6.1 and 6.2

3.131 Determinations 6.1 and 6.2 mandate the transfer of specified services in the 70X, 9XX, 77X-79X, 511 and 333 number ranges to their respective allocated ranges.

For the reasons explained in paragraphs xx to xx of this document, the Office reaffirms its decision set out in Determinations 6.1 and 6.2.

The Office acknowledges, however, an error in the wording of these Determinations and corrects the wording “Chapter 6”, in both Determinations, to read “Chapter 7”.

Determinations 6.3

3.132 Determination 6.3 mandates the transfer of six non-POTS services, identified in C&WJ’s “876 NPA Area Code Plan”, dated October 18, 2001, from the regular Geographic and Mobile ranges to the Special Services number ranges. The services were assigned one NXX code each and include:

- Audiotext
- DataPath
- FaxMail
- Single Number Service (SNS)
- Personal Number Service (PNS)
- InWATTS

The tariffs for these services are significantly higher than that of POTS and are therefore appropriately classified as Special Services, with number allocation in accordance with section 8(3) (c) of the Act. It is unclear to the Office, whether and how some of these services currently are marketed.

For the above reasons, the Office reaffirms its decision set out in Determination 6.3

Determinations 6.4 and 6.5

3.133 Determinations 6.4 and 6.5 do not relate to telephone numbers that are assigned to, or are assignable to, C&WJ's customers, and therefore cannot lead to the migration of customers as claimed by C&WJ. There is therefore no rational basis for reconsideration of these determinations in that context.

3.134 These determinations disallow the unauthorised and otherwise inappropriate uses of several of the following numbering resources:

- N11 codes, in particular, 611 and 911
- Vertical Services Codes in the *XX format
- 1XX Access codes
- NXX 321 for call centre IVR access
- Use of the Number Sign (#) character to create new numbering formats.

3.135 The following explains the proper use of the Number Sign (#) character:

*The dialling use of * and # is standardized in order to minimize confusion with the public... [“These characters now serve as network control characters. The dial equivalent to the Star (*) is the digits 1-1. There is no dial equivalent to the Number Sign (#) character since it is not used in the dialling sequence, as is the Star... The # is not a digit and appears only on DTMF phones” (Source: North American Numbering Council (NANC) September 2003 report entitled “Report and Recommendation of the Abbreviated Dialling For One Call Notification Issue Management Group”)].*

The first use of the number sign (#) is as an end-of-dialling indicator or an indicator to conclude the present action and proceed to the next. This end-of-dialling use exists today and avoids a timing period used in certain types of switching systems...

The second use of the number sign (#) is as the first character when dialling a call that is a wideband or other data call requiring special treatment. In certain types of data calls, both an initial and concluding # may be required. Functionally, this is similar in many respects to the ‘KP + (address) + ST’ multi-frequency signalling format used by operators.

(Source: ATIS-0300076: U.S. Numbering and Dialling Plan within the United States)

3.136 Some Mobile operators in North America are known to use the Number Sign (#) for carrier-specific abbreviated dialling for various applications although ‘#’ codes have never been defined in the NANP.

3.137 C&WJ's use of the abbreviated dialling arrangements #1 to #9 (nine codes) and, 74# and 75# is therefore inappropriate. Allowing C&WJ to retain this dialling scheme would effectively preclude the introduction, in the PSTN, of any new dialling format that has the Number Sign (#) as the leading character before a numerical string. The industry could

in fact decide to adopt such arrangements, as was proposed to the North American Numbering Council in the past by a NANC Ad Hoc Committee on Abbreviated Dialling.

3.138 Vertical Service Codes (VSCs) are customer-dialled codes in the *XX dialling format that provide customer access to features and services (e.g., call forwarding, automatic call-back, etc.) provided in public telecommunications networks. VSCs are assigned to features and services to enable consistent accessibility throughout the Public Telecommunications Network. The purpose of common/standard VSCs is to minimize customer confusion and provide a standard service access approach for features and services over networks across the industry. The Office Opted to adopt the Industry standard uses of VSCs. Local network operators have created new uses for some *XX codes, for their own purposes as shown in table 5 below, and new codes for existing standard services as shown in table 6. This is not permissible. The Office has made adequate provision in the 1XX number range for the numbering of the services in question.

Table 5 Unauthorised Uses of Vertical Services Codes

VSC	Local Unauthorised Use	Industry Standard Allocation
*75	"Pre-Pay" Recharge	Speed Calling 30 – Change List
*80	Voice Mail Retrieval	Selective Call Rejection - Deactivation
*86	Voice Mail Retrieval	Automatic Call Back - Deactivation
*89	Voice Mail Retrieval	Automatic Recall - Deactivation
*96	World Direct Service	(Code expanded to *96X)

Table 6 Unauthorised vertical Services Codes and Allocations

Service Feature	Local Unauthorised Code Allocation	Industry Standard Code Allocation
Speed Calling 8 – Change List	74#	*74
Speed Calling 30 – Change List	75#	*75

3.139 However, the Office concluded that the public interest would be served to allow, until otherwise determined by the Office, the dialling of 112 in the local Public Land Mobile Network for access to local emergency services, as, and only as, an international inbound roaming service.

To this end, the Office will modify Determination 6.4 to omit '112' from the list of codes in unauthorized use. The change shall be effective as of the effective date of the Office's Reconsideration Decision. International inbound roaming, as mention in this document, refers to roaming in the Public Land Mobile Network in Jamaica by customers from a Mobile network operator located in a foreign country. The operator notification date in Determination 6.4 will be amended as shown in Annex 1.

For the above reasons Office reaffirms its decision set out in Determination 6.4 and 6.5, with the exception of the foregoing changes to Determination 6.4.

Determinations 7.1 and 7.2

- 3.140** The Office's comments in relation to Determinations 7.1 and 7.2 are provided on pages 39 and 40 of this document. The Office will revise the dates, but reaffirms all other decisions set out in these determinations.

4 CONCLUSION

- 4.1** It is the position of the Office, pursuant to the objective of the relevant legislation and its regulatory mandate relating to telecommunications numbering plan development administration to guarantee fair, and non-discriminatory access to national and international numbering resources, ensure the efficient use of numbers and to promote consumer interests and competition. In addition, it is part of the Office's duty to ensure that the incumbent carrier is not placed at a disadvantage by undue changes to the numbering system existing at the inception of the Act.
- 4.2** The Office is satisfied that its actions and decisions regarding the development and administration of a National Numbering Plan for Jamaica under the mandate of Section 8 of the telecommunications Act, 2000, are consistent with that aim.
- 4.3** The Office holds, further, that C&WJ's expressed concern about the cost impact of number changes upon customers is not unreasonable, to the extent that such concern is universal in circumstances involving industry changes to telephone numbers. Indeed, it is consistent with the Office's own caution in approaching its mandate to develop a National Numbering Plan that also incorporates, to some reasonable degree, and subject to specified statutory conditions, the incumbent carrier's existing numbering infrastructure.
- 4.4** Moreover and above all, the Office acknowledges that having a regard for cost to customers in the development of a National Numbering Plan, is a matter of law. In that context, the Office appropriately regards even the perception of an adverse material cost impact, a material consideration in the development of the Jamaican National Numbering Scheme under its obligations as provided in the Act. Nevertheless, in the Office's construction of the pertinent statute, the Office has discretionary powers to determine what weight to attach to such consideration in any relevant particular circumstance.
- 4.5** From all the adduced evidence, and without holding C&WJ to any unreasonable standard or degree of proof of its claims to the contrary, the Office drew reasonable and necessary inferences relative to the perceived potential impact of number changes. These conclusions were that the proposed number changes could be implemented effectively and in a manner not unduly economically burdensome to affected customers, and with no resultant material harm to C&WJ's competitive position.
- 4.6** C&WJ imputed error in the Office's approach in the development of the Jamaican National Numbering Plan but did not provide concrete illustrations of the insufficiency

and erroneousess of the Office's actions and decisions that precluded the Office from giving proper effect to the relevant provisions of the statute, as C&WJ claimed. The company has therefore not provided the basis for a firm conviction that the alleged failure of the OUR constituted a clear and material error of law.

- 4.7 The Office also draws attention to the fact that there are obvious inconsistencies between the opinions expressed in C&WJ's application for reconsideration and the views expressed in the company's response to the Consultative Document. Such discrepancies, of course, do not facilitate the requisite *veracious* and objective consideration of the matter in hand.
- 4.8 The Office holds that its considerations and decisions relative to the development of the Numbering Plan were reasonable and made with due regard to all relevant statutory provisions under Section 8 of the Act.
- 4.9 Based on the discussions in this response it is the conclusion of the Office, that no material error of law has been elucidated in the relevant Determinations, and as a corollary, that C&WJ did not raise any arguments that would serve to convince the Office to alter its decisions in this regard.

ANNEX 1

REVISED DETERMINATIONS

Determination 6.1 In accordance with the Migration plan outlined in chapter 7 of this document: all cellular services currently provided in the 70X and 9XX ranges must be migrated to the mobile ranges. Similarly, Geographic services provided in the 77X to 79X mobile ranges must be migrated to the Geographic ranges. See Tables A2.1- Annex 2, and A4.1- Annex 4, for details

Determination 6.2 In accordance with the Migration plan outlined in chapter 7 of this document, all Geographic services currently provided in the 511 Special Services range must be migrated to the Geographic ranges. Similarly, cellular services provided in the 333 Special Services range must be migrated to the mobile ranges. See Tables A2.1- Annex 2, and A4.1- Annex 4, for details

Determination 6.4 In accordance with allocation of access codes as set out in tables 3.1 and 3.2 under determination 3.7, the current uses of the codes listed hereunder, by network operators in Jamaica, are deemed inappropriate:

- 101 Dealer Administration
- 102 Corporate Customer care
- 120 Fast Balance
- 128 FAX Mail Access
- 171 Internal Test Prepaid Platform
- 611 Access Customer Service (*Inbound Roamers*)
- 611 Customer Service (*Local*)
- 911 Police (*Inbound Roamers*)

The current uses of the Vertical Services Codes (VSCs) listed hereunder, by network operators in Jamaica, are deemed inappropriate:

- *75 "Pre-Pay" Recharge
- *80 Voice Mail Retrieval
- *86 Voice Mail Retrieval
- *89 Voice Mail Retrieval
- *96 World Direct Service

The Office will allow the continued use of 121 for access to mobile prepaid platforms for account management (account recharge, balance enquiry, etc.) because of the established association of this number with the service. This use must be common across mobile networks. The Office will inform operators individually, no later than June 15, 2006, of any inappropriate use of access codes and VSCs as outlined above, and advise them of arrangements for code changes.

Determination 7.1 The Office will convene a meeting with Cable and Wireless Jamaica no later than June 30, 2004 to discuss the details of the transition plan. The issues to be discussed will include, but not limited to, the services to be migrated and the NXXs affected; the customers that will be affected and the likely impact on both the customers and the company; methods of public notification; time lines; progress reporting.

Determination 7.2: The office adopts the following measures to facilitate the migration of services identified in Table A2.1 – Annex 2 for transfer:

- **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 being provided.**
- **Numbers not in their designated categories, to be frozen for reclamation and reallocation.**
- **No number changes to be made before May 1, 2007 to allow the industry time plan for such changes**
- **Customers to be affected by number changes to be given at least one year's notice. This is especially necessary for large 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 (or quarantined) for 90 days during which time "changed number" announcement should be applied, where practicable, in the case of business numbers.**