Canadian

Numbering Plan and Dialing Plan

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Developed by:
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1.0 Scope and Overview

Currently Canada participates in the North American Numbering Plan (NANP) [1] which is the numbering plan used by the 19 nations sharing Country Code 1 under the International Telecommunication Union ITU-T Recommendation E.164, "The international public telecommunication numbering plan" (ITU-T Rec. E.164).

This technical document defines a Standard that specifies the format and values of telephone numbers in Canada, called the Canadian Numbering Plan, and the associated Canadian Dialing Plan used on the Canadian portion of the worldwide Public Switched Telephone Network (PSTN). It also identifies other numbering resources that are used in the PSTN, and describes these uses in relation to the Canadian Dialing Plan.

The purpose of this document is to consolidate the information contained in other North American and Canadian industry documents into a single reference document for the Canadian Numbering Plan and Dialing Plan.

2.0 Introduction

2.1. International Numbering Standards and Conventions

The ITU Telecommunication Standardization Sector (ITU-T) is one of the three Sectors of the International Telecommunication Union, a Specialized Agency of the United Nations with headquarters in Geneva, Switzerland. The ITU-T studies technical, operating and tariff questions, and produces recommendations and other publications that are used to guarantee the interconnectivity and interoperability of networks and enable telecommunication services to be provided worldwide. The ITU-T website is at http://www.itu.int/ITU-T/index.html

A Numbering Plan specifies the format and structure of numbers including any segments used for identification, routing, and charging capabilities (e.g., Country Codes, Area Codes and CO Codes used for geographic routing and distance sensitive charges).

A Dialing Plan is the combination of digits and additional information that defines the method by which the Numbering Plan is used and may include prefixes, suffixes and additional information supplemental to the Numbering Plan required to complete the call (e.g., dialing the prefixes “0”, “1” and “011” for operator assistance, direct dialing within a Country Code, and direct dialing between Country Codes).

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[1] The NANP is the basic numbering scheme for the telecommunications networks in the following 19 countries in Country Code 1: Anguilla, Antigua & Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, Turks & Caicos Islands, and the United States of America (including Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and American Samoa).

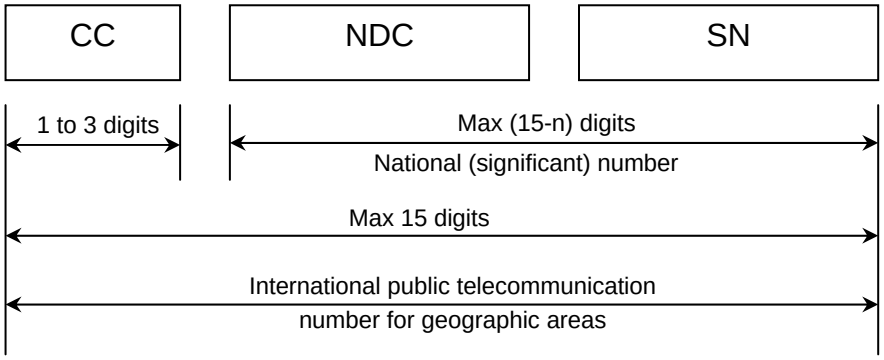
Canadian telephone numbers generally follow international standards and Canada is compliant with the major recommendations that are contained in ITU-T Rec. E.164 (See section 2.1 for a description of the E.164 Numbering Plan). Participation is essential to allow International Direct Distance Dialing (IDDD).

ITU-T Rec. E.164 provides three categories of telephone numbers for international public telecommunications:

1. Geographic Areas
2. Global Services
3. Networks

The maximum quantity of digits in the ITU-T Rec. E.164 Numbering Plan is 15. The first field in the ITU-T Rec. E.164 International Numbering Plan is the Country Code which can be from 1 to 3 digits in length. Country Codes may be assigned to Geographic Areas, Global Services or shared among Networks. Canada is part of Country Code 1 (previously called World Zone 1) and shares the single digit Country Code “1” with 18 other nations located primarily in North America. The NANP currently uses 11 digits consisting of a single digit Country Code and a 10-digit National (significant) Number, as indicated below.

Structure of the international public telecommunication number according to ITU-T Recommendation E.164



CC	Country Code for geographic areas
NDC	National Destination Code (optional)
SN	Subscriber Number
n	Number of digits in the country code

Canadian numbering plan alignment with ITU-T Recommendation E.164

CC = 1 (single digit)
NDC = Numbering Plan Area (NPA) Code (3 digits)
SN = CO Code plus Line Number (7 digits)
n = 1 digit

In the NANP, the NPA Code is generally equivalent to the NDC contained in ITU-T Rec. E.164, and the Central Office (CO) Code and Line Number are generally equivalent to the Station Number contained in ITU-T Rec. E.164.

The ITU-T Rec. E.164 International Numbering Plan requires that all participating nations ensure that their carriers provision their networks to accommodate up to a maximum of 15 digits.

3.0 Historical References and Perspectives

3.1. NANP Responsibilities

AT&T was instrumental in the development and evolution of the numbering portion of the NANP from its inception in 1947 until the breakup of AT&T (Modification of Final Judgment) on January 1, 1984. The NANP was coordinated by Bell Communications Research Corporation (Bellcore) from 1984 until the enactment of the U.S. Telecommunications Act of 1996 (TA-96). In this time period, Bellcore maintained and coordinated the evolution of the NANP by working with telecommunications regulators and industry forums such as the Industry Carriers Compatibility Forum (ICCF) sponsored by the Alliance for Telecommunications Industry Solutions (ATIS).

Until 1996, the Industry Numbering Committee (INC) operated as a committee of the ICCF. Since 1996, the INC, operating in cooperation with the NANP area national telecommunications regulators, developed industry consensus guidelines and recommendations for the assignment and administration of NANP numbering resources. These national regulators include the Federal Communications Commission (FCC) in the USA and the Canadian Radio-television and Telecommunications Commission (CRTC) in Canada.

In Canada, prior to July 31, 1998, the Canadian Steering Committee on Numbering (CSCN) operated under the auspices of Industry Canada with a mandate to develop strategies and guidelines for the efficient, effective and equitable use of numbering resources in Canada, to provide input and support to Industry Canada on Canadian policies related to numbering, and provide guidance to the Canadian Numbering Administrator (CNA) on the administration of the numbering plan resources in Canada based on agreed guidelines and procedures.

In July 1998, under the amended Telecommunications Act, the CRTC was granted authority to administer numbering resources in Canada. Industry Canada remains responsible for coordinating the Canadian position on numbering with the ITU.

Section 46.1 of the *Telecommunications Act* grants the CRTC the authority to administer numbering resources in Canada.

> 46.1 The Commission may, if it determines that to do so would facilitate the interoperation of Canadian telecommunications networks,
>
> (a) administer
>
> (i) databases or information, administrative or operational systems related to the functioning of telecommunications networks, or
>
> (ii) numbering resources used in the functioning of telecommunications networks, including the portion of the North American Numbering Plan resources that relates to Canadian telecommunications networks; and
>
> (b) determine any matter and make any order with respect to the databases, information, administrative or operational systems or numbering resources.

Currently the CSCN is responsible for addressing Canadian numbering issues and developing number planning and implementation strategies for the Canadian telecommunications industry under CRTC regulatory oversight. The CSCN is an open public forum established as a subtending Working Group of the CRTC Interconnection Steering Committee (CISC). The CISC is a committee comprised of various industry representatives that was initiated to facilitate implementation of Telecom Decision CRTC 97-8, Local Competition, and continues to exist to address various telecommunications industry issues. For further information, see the CSCN Adjunct to the CISC Administrative Guidelines (http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm).

In Country Code 1 the NANP numbering resources at the NPA level are administered by the NANP Administration (NANPA), which is contracted by the U.S. federal government to a neutral third party. In Canada, NANP numbering resources used in or assigned to Canada, including NPAs and other numbering resources, are administered by the CNA, which is contracted by the Canadian Numbering Administration Consortium (CNAC) to a neutral third party, under CRTC regulatory oversight.

3.2. Historical NANP Evolution

- 1947: Initial NANP developed
  NANP format: N (0 or 1)2 X – NNX – XXXX
  where N = 2 to 9 and X = 0 to 9.

Initially the NN digits in the NNX portion of a NANP number had "exchange" names whose first two letters corresponded to letters associated with the NN digits on North American telephone dials, e.g. 23 could be BEechwood, BElmont, or CEdar. 7-digit NNX-XXXX numbers were represented as 2-letter + 5-digit numbers (2L-5D), so that 736-5000 could be expressed as PE.6-5000 or Pennsylvania 6-5000. The use of the 2L-5D representation was phased out following the introduction of All Number Calling in 1959.

- 1973 Initial introduction of Interchangeable CO Codes
  NANP format: N (0 or 1)2X – NXX – XXXX

- 1995: Interchangeable NPA codes implemented
  NANP format: NXX – NXX – XXXX

The theoretical capacity of the current 10-digit NANP format is 6.4 billion numbers (i.e., 800 Area Codes X 800 CO Codes X 10,000 Telephone Numbers). At this time, it is expected that the NANP will last until beyond 2037.

In the future it is uncertain how the NANP format will evolve to meet the expected increased demand for telephone numbers. In recent years the INC and the CSCN have recommended to the governments of the nations participating in the NANP that the NANP be expanded from 10 to 12 digits when additional numbering resources are required. The INC and CSCN have recommended that future expansion of the NANP be done by adding a new 4th digit at the end of the NPA and a new 5th digit at the beginning of the CO Code. The new NANP format would be: NXXX-XNXX-XXXX. Expansion would be preceded by the implementation of 10-digit dialing for both local and toll calls (elimination of 1+ for toll). At this time, Canada and the other 18 nations in the NANP have not yet agreed on an expansion plan; however it is probable that the recommendation to expand from 10 to 12 digits will be approved prior to NANP expansion.

4.0 Definition of a Telephone Number Used in Canada

4.1 Canadian Telephone Number Format and Values

The numbering plan used in Canada and the other 18 nations served by Country Code 1 is known as the NANP. A Canadian telephone number consists of the Country Code 1 plus a 10-digit NANP telephone number. Current NANP telephone numbers are ten digit numbers that consist of the following three basic parts:

2 The use of the parentheses in this instance indicates that the central digit of the Area Code could only be "1" or "0".

a) A 3-digit Numbering Plan Area (NPA) code, commonly called the Area Code.

b) A 3-digit Central Office (CO) Code, sometimes referred to as the NXX code. The term Central Office (CO) Code is used in this document because of its long standing use and because the NXX format is used for both CO Codes and NPA codes.

c) A 4-digit Line Number sometimes referred to as a station number.

The current format of a ten digit NANP Number is NXX-NXX-XXXX where N = digits 2 through 9, and X = any digit of 0 through 9. The digit positions in the NANP format, excluding the Country Code, can be identified by alphabetical characters using the following format ABC-DEF-GHIJ, where ABC is the NPA, DEF is the CO Code, and GHIJ is the Line Number.

Therefore:

A complete Canadian telephone number is an eleven digit number that contains the Country Code “1” plus the 10-digit NANP telephone number. When written or printed, the three groups of digits comprising the 10-digit NANP number should be visually separated by dashes, spaces or periods in accordance with ITU-T Recommendation E.123 “Notation for national and international telephone numbers, e-mail addresses and Web addresses” to make them easier to recognize and remember (e.g., NXX NXX-XXXX). When a Canadian telephone number is written or printed as an international number, the NANP number should be prefixed by "+1" and a space (e.g., +1 NXX NXX-XXXX).

5.0 The Canadian Dial Plan

In Canada, there is no single Dial Plan that applies universally in all areas. In most locations where a single NPA code is in use, local calling within a defined geographic area called the local calling area (LCA), can generally be done by dialing only the last 7 digits (7D) of the NANP number (i.e., the CO Code and Line Number). In those locations some telecommunications service providers may also permit callers to dial 10 digits (10D) for local calls on a permissive dialing basis. In locations where overlay NPAs have been implemented (i.e., more than one NPA is in use) or where local calling crosses an NPA boundary, local calling generally requires dialing the full 10-digit NANP number (i.e., the NPA, CO Code and Line Number). In some locations local calls across an NPA boundary may be dialed using only the last 7 digits of the NANP number (i.e., the CO Code and Line Number). Long distance calling to NANP locations outside the originating caller’s local calling area requires dialing the prefix 1 plus the 10-digit NANP number (1+10D) for direct dialed calls, or dialing the prefix 0 plus the 10-digit NANP number (0+10D) for operator assisted calls (see section 6.1 for further information regarding prefix dialing requirements). For long distance calling outside Country Code 1, the Dial Plan is the appropriate international calling prefix (e.g., 01 and 011) plus the international telephone number. See the Appendix “Canadian Dialing Plan” for additional information.

In the late 1990s, the INC and CSCN examined the need for a Uniform Dialing Plan (UDP). After consideration of many options, the INC and CSCN both concluded that adoption of a UDP would be beneficial for the industry and customers. The INC and CSCN recommended to the NANP area nations' regulators that a Uniform Dialing Plan be adopted. The benefits of a Uniform Dialing Plan include reduced customer confusion, particularly in today's mobile society, and support for a consistent, fair and equitable competitive environment. Specifically the INC and CSCN recommended that 10-digit dialing be adopted as the UDP for both Local and Toll calling. The INC and CSCN noted that implementation of the recommendation requires regulatory approval and resolution of the need for "1+" as a toll indicator. In Canada, some carriers supported the implementation of a toll warning indicator tone when additional toll charges would apply.

The INC suggested that migration to the UDP should begin by first adopting the following dialing arrangements as interim steps:

1. 10-digit local dialing within the home NPA with 1+ 10-digit dialing on a permissive basis
2. 10-digit local dialing to a foreign NPA with 1+10-digit dialing on a permissive basis

In conjunction with the migration to the UDP, the INC recommended that the industry address the need for the continued use of a toll indicator. The successful completion of the above steps would allow for the implementation of the 10-digit dialing UDP throughout the NANP area.

All other numbers used by telephone systems fall in the category of prefixes or access codes. All of the numbers, access codes and prefixes comprise the Canadian Dialing Plan found in the Appendix.

6.0 Other Codes

The industry has always employed other codes to access certain capabilities or call types.

6.1 Prefixes

The most commonly used prefixes are the digit 1 preceding a sent paid toll call, and the digit 0 which precedes an operator handled toll call. The current list of commonly used prefixes is shown below. Prefixes are usually deleted or used in the originating switch before the NANP number digits are used to route the call to its final destination.

Prefix	Use of Code
0+ NANP 10-digit Number	Person Paid Collect Special (PPCS) Call
01+ International Number	International PPCS Call
011 + International Number	International Station to Station Sent Paid (SSSP) Call
1+ NANP 10-digit Number	Toll Access for SSSP Calls

The wireless telephone industry does not always use standard NANP wireline prefixes or access codes. For example, in some wireless networks based on the Global System for Mobile communications standard (GSM), the "+" character dialed before the country code and national number provides uniform dialing for local, toll and international calls, and avoids the need for country-dependent prefixes.

6.2 Operator Access Codes

Two special codes can be dialed to access operators, as per the table below:

Operator Access Code	Use of Code
0	Telephone Company Operator
00	Long Distance Carrier Operator

6.3 Codes 000-199

Using the values 0 and 1 in the “A” or “D” digit positions of a NANP number would create the NPA and CO Codes in the series 000-199. These codes are not part of the currently defined NANP format for either the NPA or CO Code portions of a NANP number, and therefore are not publicly dialable NANP telephone numbers or addresses. 000-199 were excluded from the original NANP format and this exclusion has continued to date.

However, the NANP-wide telephone industry uses these codes for various networking and operational purposes including, but not limited to, Test Codes, Inward Operator Codes, Special Billing Numbers, Revenue Accounting Office (RAO) Credit Card Numbers and special routing of calls.

Various switching systems have employed software checks that block calls to and from numbers with the codes 000-199. These software checks were installed to minimize fraud. In addition, Operator Services switching systems have software to validate credit card calls that utilize these codes. Numbers utilizing the codes 000-199 are not customer dialable.

6.4 Star Code *

The star code* is standardized within the PSTN and used for special dialing and communications purposes.[3] It is important that consistent terminology be known and used when referring to this character. The * should be called the “star” and not “asterisk”. Currently, the * character has the following general applications:

The standard use of the star (*) is as a prefix when dialing a Vertical Service Code (VSC). VSCs are customer-dialed codes that provide access to features and services provided by local exchange carriers, interexchange carriers, commercial mobile radio service (CMRS), etc. Services invoked by VSCs include call forwarding, automatic callback, customer originated trace, and many others. The format of a VSC is *XX or *2XX (Dual Tone Multi Frequency DTMF telephone) and 11XX or 112XX (rotary dial telephone). For example, call forwarding is activated by dialing *72 or 1172. VSCs are assigned according to guidelines proposed by the CSCN and approved by the CRTC, and are listed on the CNA web site at www.cnac.ca. Currently there is some inconsistency in the use of VSCs for specific features or services in different carrier networks. In this application, the * indicates to the switching system that the digits following specify a certain desired feature or service. Access to vertical services from rotary dial telephones can be accomplished by dialing the digits “11” prior to the XX or 2XX digits. The local serving switch translates the “11” to simulate the star key in stored program controlled switches.

Vertical Service Code Format	Use of Code
*XX (*2XX)	Vertical Service Code Access
11XX (112XX)	Vertical Service Code Alternate (Permissive) Access

Vertical Service Codes are NANP numbering resources. They are administered by NANPA. The current agreed allocations for VSCs are available at the web site: http://www.nanpa.com/

Once a connection is made via the PSTN, the star code * may be used for secondary signaling purposes with equipment attached to the PSTN. For example, the * code may be used within a carrier’s network to provide an error correcting function for secondary dialing by customers of various series of digits on a sequential basis in response to prompting from a network element.

6.5 Number Sign

The number sign # code is standardized within the PSTN and used for special dialing and communications purposes. It is important that consistent terminology be known and used when referring to this character. The # should be called the “number sign” and not “pound”, “ampersand”, or "octothorpe”. Currently, the # character has the following general application.

3 AT&T Technical Advisory #3, NPL 81-09-27, Issue 2, December 1, 1981

The standard use of the number sign # is as an end-of-dialing indicator or conclude the present action and proceed to the next action indicator. This end-of-dialing use exists today, and avoids the need for invoking a timing period in certain types of switching systems. The conclude-and-proceed use also occurs in some telephone credit card service applications where the customer wants to indicate that the present call is over and a new call is about to be placed (e.g., sequence calling).

Another historical use of the number sign # was as the first character when dialing a call that is a wideband or other data call requiring special treatment. In certain types of data calls, both an initial and a concluding # may be required. This was only used in networks with Multi-Frequency (MF) signaling.

There are also some non-standard uses of the # sign for Personal Identification Number (PIN) calling features. The # sign is also used in ancillary equipment attached to the PSTN. An example of this is equipment used to provide voice mail services.

6.6 N11 Codes

N11 Codes are assigned by the CRTC in Canada and by the FCC in the United States. In Canada, the CRTC assigns the N11 codes for specific applications in accordance with criteria established by the CRTC in Telecom Decision CRTC 2001-475 Allocation of 3 digit dialing for public information and referral services. Geographic NPAs and CO Codes in format N11 are not assignable in Country Code 1 to avoid causing customer confusion and network routing difficulties.

Canadian N11 Service Codes

N11 Code	Use of Code
211	Community Information[4]
311	Non-Emergency Municipal Government Services[5]
411	Directory Assistance
511	Weather & Traveller Information[6]
611	Repair Service
711	Access to Message Relay Service (MRS) by the deaf[7]
811	Non-urgent Health Teletriage Services[8]
911	Emergency

4 Telecom Decision CRTC 2001-475
5 Telecom Decision CRTC 2004-71
6 Telecom Decision CRTC 2006-44
7 See CRTC letter dated August 4, 1993 from the CRTC Secretary General to the Chairman of the CSCN.
8 Telecom Decision CRTC 2005-39

6.7 Easily Recognizable Codes (ERCs)

Easily Recognizable Codes (ERCs) are NPA Codes that due to their unique, recognizable digit pattern (e.g., common 'B' and 'C' digit; codes with the same second and third digits) convey certain unique knowledge regarding a call to a telephone number other than the number being dialed (e.g., 800+). ERCs include N00 NPA Codes, codes for other special services, e.g. toll-free service, and N11 Codes. N11 Codes are described in section 6.6 above. .N00 NPA codes and toll-free codes are assigned by the Alliance for Telecommunications Industry Solutions' (ATIS) Industry Numbering Committee (INC).

N00 NPA Codes

ERC	Status or Use of Code
200	Unassigned
300	Unassigned
400	Unassigned
500	Personal Communications Services – Note 1
600	Canadian Non-Geographic Services
700	IXC Intra-Network Services – Note 2
800	Toll Free Services
900	Pay-Per-Call Information Services

Note 1: NPA 533 is also assigned for Personal Communications Services growth. NPAs 522, 544, 566, 577 and 588 are reserved for future PCS expansion.

Note 2: NPA 700 numbers can be used independently by each Interexchange Carrier (IXC) for applications and customers on its own network. Therefore, different customers on different IXC networks may be assigned the same NPA 700 number.

Toll-free Service Codes

ERC	Status
800	In service
888	In service
877	In service
866	In service
855	Assigned but not in service
844	Assigned but not in service
833	Assigned but not in service
822	Assigned but not in service
880	Reserved - set aside for next series of toll free codes
881	Reserved - set aside for next series of toll free codes
882	Reserved - set aside for next series of toll free codes
883	Reserved - set aside for next series of toll free codes
884	Reserved - set aside for next series of toll free codes
885	Reserved - set aside for next series of toll free codes
886	Reserved - set aside for next series of toll free codes
887	Reserved - set aside for next series of toll free codes
889	Reserved - set aside for next series of toll free codes

6.8 Carrier Identification Codes (CICs)

CICs are 4 digit codes used mainly to route long-distance calls to a customer's IXC of choice. The CIC is associated with the customer's line for 1+ and 0+ calls. A customer may also dial the CIC as part of a Carrier Access Code number. In Canada, the CNA, in cooperation with NANPA, conducts the assignment of CICs to IXCs, Switchless Resellers and LECs.

6.9 Carrier Access Codes (CACs)

In order to select an IXC for a call, customers can dial an access code that contains a CIC. The format of this CAC is either 101XXXX or 950XXXX, where the XXXX is the CIC. CAC 101XXXX is used as a prefix to the normal dialing sequence for a toll call. CAC 950XXXX requires secondary dialing that includes an authorization code and the called number.

Carrier Access Code	Use of Code
101XXXX	Carrier Access Code (CAC), Feature Group “D”
950XXXX	Carrier Access Code (CAC), Feature Group “B”

6.10 Wireless Sector Special Numbering Requirements

The wireless telephone industry also has other numbering requirements, separate from the number associated with the wireless subscriber. Most of these requirements are necessitated by wireless roaming and access to emergency services via dialing 9-1-1.

Acronym	Description	Format	Comments
ESRD	Emergency Service Routing Digit	10-digit NANP # in format NXX-NXX-XXXX	Identifies the cell site and sector from which a Wireless E9-1-1 call originates. In Canada, in each geographic NPA, the 511-XXXX series of telephone numbers have been allocated for use as ESRDs.
IMSI	International Mobile Station Identity	NXX-XXX-XXXXXXXXX	A non-diallable number that uniquely identifies a mobile station used in wireless networks that conform to ITU-T Recommendation E.212. An IMSI consists of a Mobile Country Code (3 digits) + Mobile Network Code (3 digits) + Mobile Station Identification Number (9 digits in North America).
IRM	International Roaming Mobile Identification Number	1/0-XXX-XXX-XXXX	A 10-digit MIN that is a transitional terminal identifier for international CMRS Roaming.
MDN	Mobile Directory Number	NPA-NXX-XXXX	Wireless subscriber’s 10-digit NANP telephone number.
MIN	Mobile	NXXNXX-XXXX	A non-diallable number that uniquely

Acronym	Description	Format	Comments
	Identification Number		identifies a mobile station used with most wireless networks based on CDMA (Code Division Multiple Access), TDMA (Time Division Multiple Access) and AMPS (Advanced Mobile Phone System). A MIN consists of a MIN Block Identifier (6 digits) + Mobile Subscriber Number (4 digits).
MSID	Mobile Station Identity	10 or 15 digits	A non-diallable number used to uniquely identify a mobile station; the MSID is either a MIN or an IMSI.

7.0 Acronyms and Abbreviations

2L-5D	2 Letters + 5 Digits Telephone numbers
AMPS	Advanced Mobile Phone System
AT&T	American Telephone and Telegraph
ATIS	Alliance for Telecommunications Industry Solutions
CAC	Carrier Access Code
CC	Country Code
CDMA	Code Division Multiple Access
CIC	Carrier Identification Code
CISC	CRTC Interconnection Steering Committee
CMRS	Commercial Mobile Radio Services
CNA	Canadian Numbering Administrator
CNAC	Canadian Numbering Administration Consortium
CO Code	Central Office Code (NXX)
CRTC	Canadian Radio-television and Telecommunications Commission
CSCN	Canadian Steering Committee on Numbering
DDD	Direct Distance Dialing
DTMF	Dual Tone Multi Frequency
ERC	Easily Recognizable Code
ESRD	Emergency Service Routing Digit
FCC	United States Federal Communications Commission
GSM	Global System for Mobile communications standard; originally from Groupe Spécial Mobile
ICCF	Industry Carriers Compatibility Forum
IDDD	International Direct Distance Dialing
IMSI	International Mobile Station Identity
INC	ATIS-sponsored Industry Numbering Committee
IRM	International Roaming Mobile Identification Number
ITU	International Telecommunication Union
ITU-T	ITU Telecommunication Standardization Sector
IX	Interexchange
IXC	Interexchange Carrier
LCA	Local Calling Area
MDN	Mobile Directory Number
MF	Multi-Frequency
MIN	Mobile Identification Number
MRS	Message Relay Service
MSID	Mobile Station Identity

NANP	North American Numbering Plan
NANPA	North American Numbering Plan Administration
NDC	National Destination Code
NPA	Numbering Plan Area (Area Code)
PIN	Personal Identification Number
PPCS	Person to Person, Collect and Special
PSTN	Public Switched Telephone Network
RAO	Revenue Accounting Office
SN	Station Number
SSSP	Station to Station Sent Paid
TDMA	Time Division Multiple Access
UDP	Uniform Dialing Plan
USITA	United States Independent Telephone Association
USTA	United States Telecom Association
VSC	Vertical Service Code

APPENDIX - CANADIAN DIALING PLAN

Table 1 - Quantity of digits dialed

QUANTITY OF DIGITS DIALED	*FORMAT*	*CALL TYPE*	*COMMENTS*
No digits	Seizure (off hook) wireline only	Hot Line, Warm Line	Automatic connection to predetermined location (e.g., to local telecommunications service provider operator or business office)
One digit	0	Local Operator	Connection to local Telecommunications Service Provider's operator
Two digits	00	IXC Operator	Connection to originating customer's IXC's operator
Three digits	N11	Service Codes	Connection to special services
	*XX	Vertical Service Codes	Activation of service, acknowledgment tone is returned to customer and dial tone is returned.
Four digits	11XX	Vertical Service from Dial Pulse phone (also works on DTMF phones)	Activation of service, acknowledgment tone is returned to customer and dial tone is returned.
	*XXX	Vertical Service Codes	Activation of service, acknowledgment tone is returned to customer and dial tone is returned.
Seven digits	NXX-XXXX	Local call, where 7-digit local dialing is in effect	Call completion
Ten digits	NXX-NXX-XXXX	Local call, where 10-digit local dialing is required, or offered on a permissive basis where 7-digit local dialing is in effect.	Call completion
Eleven digits	1 NXX-NXX-XXXX	SSSP call to another NANP location	Call completion
	0 NXX-NXX-XXXX	PPCS call to another NANP location	Call completion
Greater than eleven digits	01 + CC + NDC + number where CC = Country Code and NDC = National Destination Code (City Code)	International PPCS call	Call completion Note: The quantity of digits can be from 12 to 15 digits plus the Access Code.
	011 + CC + NDC + Number where CC = Country Code and NDC = National Destination Code (City Code)	International SSSP call	Call Completion Note: These calls can be from 12 to 15 digits plus the Access Code.

Table 2 - Dialing plan in each NPA

DIALING PLAN as of 1 JANUARY 2008

NPA	PROVINCE or TERRITORY	LOCATION	STANDARD DIALING PLAN				
			HNPA LOCAL	HNPA TOLL	FNPA LOCAL	FNPA TOLL	OPERATOR ASSISTED
204	Manitoba	Manitoba (province-wide)	7D	1+10D	7D	1+10D	0+10D
226	Ontario	SW Ontario (Windsor, London, Waterloo) – overlay of 519	10D	1+10D	10D	1+10D	0+10D
250	British Columbia	Vancouver Island & Mainland excl. Lower Mainland	7D	1+10D	7D	1+10D	0+10D
289	Ontario	Toronto fringe – overlay of 905	10D	1+10D	10D	1+10D	0+10D
306	Saskatchewan	Saskatchewan (province-wide)	7D	1+10D	7D	1+10D	0+10D
403	Alberta	S Alberta (Calgary)	7D	1+10D	7D	1+10D	0+10D
416	Ontario	Toronto	10D	1+10D	10D	1+10D	0+10D
418	Québec	NE Québec (Québec City)	7D	1+10D	7D & 10D	1+10D	0+10D
438	Québec	Montréal – overlay of 514	10D	1+10D	10D	1+10D	0+10D
450	Québec	Montréal fringe	10D	1+10D	10D	1+10D	0+10D
506	New Brunswick	New Brunswick (province-wide)	7D	1+10D	7D	1+10D	0+10D
514	Quebec	Montréal	10D	1+10D	10D	1+10D	0+10D
519	Ontario	SW Ontario (Windsor, London, Waterloo)	10D	1+10D	10D	1+10D	0+10D
604	British Columbia	Lower Mainland (Vancouver)	10D	1+10D	10D	1+10D	0+10D
613	Ontario	E Ontario (Ottawa)	10D	1+10D	10D	1+10D	0+10D
647	Ontario	Toronto	10D	1+10D	10D	1+10D	0+10D

DIALING PLAN as of 1 JANUARY 2008

NPA	PROVINCE or TERRITORY	LOCATION	STANDARD DIALING PLAN				
			HNPA LOCAL	HNPA TOLL	FNPA LOCAL	FNPA TOLL	OPERATOR ASSISTED
705	Ontario	NE Ontario	7D	1+10D	7D & 10D	1+10D	0+10D
709	Newfoundland & Labrador	Newfoundland & Labrador (province-wide)	7D	1+10D	7D	1+10D	0+10D
778	British Columbia	BC (province-wide) – overlay of 250 & 604	7D & 10D	1+10D	7D & 10D	1+10D	0+10D
			Note		Note		
780	Alberta	N Alberta (Edmonton)	7D	1+10D	7D	1+10D	0+10D
807	Ontario	NW Ontario	7D	1+10D	7D	1+10D	0+10D
819	Québec	NW Québec	10D	1+10D	10D	1+10D	0+10D
867	NWT, Nunavut & Yukon	NWT, Nunavut & Yukon (all territory-wide)	7D	1+10D	7D	1+10D	0+10D
902	Nova Scotia & PEI	Nova Scotia & PEI (both province-wide)	7D	1+10D	7D	1+10D	0+10D
905	Ontario	Toronto fringe	10D	1+10D	10D	1+10D	0+10D

HNPA = Home NPA; FNPA = Foreign NPA

7D = 7 Digits consisting of the CO Code and Line Number in format NXX-XXXX
10D = 10 Digits consisting of the NPA, CO Code and Line Number in format NXX-NXX-XXXX
1+10D = Prefix 1 plus 10 Digits consisting of the NPA, CO Code and Line Number in format 1+NXX-NXX-XXXX
0+10D = Prefix 0 plus 10 Digits consisting of the NPA, CO Code and Line Number in format 0+NXX-NXX-XXXX

Note: In the portion of NPA 778 that overlays NPA 604, local dialing is 10D; in the portion of NPA 778 that overlays NPA 250, local dialing is 7D.

FUTURE DIALING PLAN AS OF 19 September 2008

NPA	PROVINCE or TERRITORY	LOCATION	STANDARD DIALING PLAN				
			HNPA LOCAL	HNPA TOLL	FNPA LOCAL	FNPA TOLL	OPERATOR ASSISTED
204	Manitoba	Manitoba (province-wide)	7D	1+10D	7D	1+10D	0+10D
226	Ontario	SW Ontario (Windsor, London, Waterloo) - overlay of 519	10D	1+10D	10D	1+10D	0+10D
250	British Columbia	Vancouver Island & Mainland excl. Lower Mainland	10D	1+10D	10D	1+10D	0+10D
289	Ontario	Toronto fringe - overlay of 905	10D	1+10D	10D	1+10D	0+10D
306	Saskatchewan	Saskatchewan (province-wide)	7D	1+10D	7D	1+10D	0+10D
403	Alberta	S Alberta (Calgary)	10D	1+10D	10D	1+10D	0+10D
416	Ontario	Toronto	10D	1+10D	10D	1+10D	0+10D
418	Québec	NE Québec (Québec City)	10D	1+10D	10D	1+10D	0+10D
438	Québec	Montréal - overlay of 514	10D	1+10D	10D	1+10D	0+10D
450	Québec	Montréal fringe	10D	1+10D	10D	1+10D	0+10D
506	New Brunswick	New Brunswick (province-wide)	7D	1+10D	7D	1+10D	0+10D
514	Québec	Montréal	10D	1+10D	10D	1+10D	0+10D
519	Ontario	SW Ontario (Windsor, London, Waterloo)	10D	1+10D	10D	1+10D	0+10D
581	Québec	NE Québec (Québec City) - overlay of 418	10D	1+10D	10D	1+10D	0+10D
587	Alberta	Alberta (province-wide) - overlay of 403 & 780	10D	1+10D	10D	1+10D	0+10D
604	British Columbia	Lower Mainland (Vancouver)	10D	1+10D	10D	1+10D	0+10D
613	Ontario	E Ontario (Ottawa)	10D	1+10D	10D	1+10D	0+10D
647	Ontario	Toronto	10D	1+10D	10D	1+10D	0+10D
705	Ontario	NE Ontario	7D	1+10D	7D & 10D	1+10D	0+10D

FUTURE DIALING PLAN AS OF 19 September 2008

NPA	PROVINCE or TERRITORY	LOCATION	STANDARD DIALING PLAN				
			HNPA LOCAL	HNPA TOLL	FNPA LOCAL	FNPA TOLL	OPERATOR ASSISTED
709	Newfoundland & Labrador	Newfoundland & Labrador (province-wide)	7D	1+10D	7D	1+10D	0+10D
778	British Columbia	BC (province wide) - overlay of 250 & 604	10D	1+10D	10D	1+10D	0+10D
780	Alberta	N Alberta (Edmonton)	7D	1+10D	7D	1+10D	0+10D
807	Ontario	NW Ontario	7D	1+10D	7D	1+10D	0+10D
819	Québec	NW Québec	10D	1+10D	10D	1+10D	0+10D
867	NWT, Nunavut & Yukon	NWT, Nunavut & Yukon (all territory-wide)	7D	1+10D	7D	1+10D	0+10D
902	Nova Scotia & PEI	Nova Scotia & PEI (both province-wide)	7D	1+10D	7D	1+10D	0+10D
905	Ontario	Toronto fringe	10D	1+10D	10D	1+10D	0+10D

HNPA = Home NPA; FNPA = Foreign NPA

7D = 7 Digits consisting of the CO Code and Line Number in format NXX-XXXX
10D = 10 Digits consisting of the NPA, CO Code and Line Number in format NXX-NXX-XXXX
1+10D = Prefix 1 plus 10 Digits consisting of the NPA, CO Code and Line Number in format 1+NXX-NXX-XXXX
0+10D = Prefix 0 plus 10 Digits consisting of the NPA, CO Code and Line Number in format 0+NXX-NXX-XXXX

Date: 4 February 2008

CANADA

E.164 National Numbering for Canada as Part of Country Code 1

Canada is part of Country Code 1, and participates in the North American Number Plan (NANP) with the USA and 17 Caribbean nations. A Canadian E.164 number consists of the single-digit Country Code "1", followed by a 10-digit NANP number consisting of a 3-digit Numbering Plan Area (NPA), commonly called the Area Code, a 3-digit Central Office (CO) Code, and a 4-digit Line Number. The format of the NANP number is NXX-NXX-XXXX where N = 2 to 9 and X = 0 to 9 (e.g., 613-563-7242 where 613 is the NPA, 563 is the CO Code, and 7242 is the Line Number).

a) Overview:

The minimum number length (excluding the country code) is **10** digits

The maximum number length (excluding the country code) is **10** digits

b) Detail of numbering scheme:

(1) NDC (National Destination Code) or leading digits of N(S)N (National (Significant) Number) (also called Numbering Plan Area (NPA) or Area Code)	(2) N(S)N number length		(3) Usage of E.164 number	(4) Additional information
	Maximum length	Minimum length		
NON-GEOGRAPHIC CODES				
456 (NDC)	10	10	International Inbound NPA for routing calls to carrier-specific services to and between NANP area countries	Shared with other CC1 NANP area nations
500 (NDC)	10	10	Non-geographic number – Personal Communication Services	Shared with other CC1 NANP area nations
600 (NDC)	10	10	Non-geographic number – Various uses	Allocated for use in Canada
700 (NDC)	10	10	For unrestricted use within the NANP area by an IX carrier within its own network	Shared with other CC1 NANP area nations
710 (NDC)	10	10	Used in Canada for routing calls to the U.S. government National Communication System	U.S. government NDC
800 (NDC) 866 (NDC) 877 (NDC) 888 (NDC)	10	10	Non-geographic number – Toll Free numbers with charges billed to called party	Shared with other CC1 NANP area nations
900 (NDC)	10	10	Non-geographic number – Pay-Per-Call numbers with charges billed to calling party	Shared with other CC1 NANP area nations

GEOGRAPHIC CODES				
204 (NDC)	10	10	Geographic number – wireline and wireless telephony	Province of Manitoba
226 (NDC)	10	10	Geographic number – wireline and wireless telephony	South-Western part of Province of Ontario (same area as 519)
250 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of British Columbia including Vancouver Island & Mainland, excluding Lower Mainland (same area as part of 778)
289 (NDC)	10	10	Geographic number – wireline and wireless telephony	Southern part of Province of Ontario surrounding Toronto (same area as 905)
306 (NDC)	10	10	Geographic number – wireline and wireless telephony	Province of Saskatchewan
403 (NDC)	10	10	Geographic number – wireline and wireless telephony	Southern part of Province of Alberta (same area as part of 587)
416 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of Ontario – Toronto area (same area as 647)
418 (NDC)	10	10	Geographic number – wireline and wireless telephony	North-Eastern part of Province of Québec (same area as 581)
438 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of Québec – Montréal area (same area as 514)
450 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of Québec – Area surrounding Montréal
506 (NDC)	10	10	Geographic number – wireline and wireless telephony	Province of New Brunswick
514 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of Québec – Montréal area (same area as 438)
519 (NDC)	10	10	Geographic number – wireline and wireless telephony	South-Western part of Province of Ontario (same area as 226)
581 (NDC)	10	10	Geographic number – wireline and wireless telephony	North-Eastern part of Province of Québec (same area as 418) effective 19 September 2008
587 (NDC)	10	10	Geographic number – wireline and wireless telephony	Province of Alberta (overlays 403 & 780) effective 19 September 2008

604 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of British Columbia, including Lower Mainland (Vancouver) (same area as part of 778)
613 (NDC)	10	10	Geographic number – wireline and wireless telephony	Eastern part of Province of Ontario
647 (NDC)	10	10	Geographic number – wireline and wireless telephony	Part of Province of Ontario – Toronto area (same area as 416)
705 (NDC)	10	10	Geographic number – wireline and wireless telephony	North-Eastern part of Province of Ontario
709 (NDC)	10	10	Geographic number – wireline and wireless telephony	Province of Newfoundland and Labrador
778 (NDC)	10	10	Geographic number – wireline and wireless telephony	Province of British Columbia (overlays 250 and 604)
780 (NDC)	10	10	Geographic number – wireline and wireless telephony	Northern part of Province of Alberta (same area as part of 587)
807 (NDC)	10	10	Geographic number – wireline and wireless telephony	North-Western part of Province of Ontario
819 (NDC)	10	10	Geographic number – wireline and wireless telephony	North & North-Western part of Province of Québec
867 (NDC)	10	10	Geographic number – wireline and wireless telephony	Northwest Territories, Nunavut and Yukon
902 (NDC)	10	10	Geographic number – wireline and wireless telephony	Provinces of Nova Scotia and Prince Edward Island
905 (NDC)	10	10	Geographic number – wireline and wireless telephony	Southern part of Province of Ontario surrounding Toronto (same area as 289)