Canadian Numbering Administrator Annual Report

January 1, 2020
to
December 31, 2020

CNA Staff

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Canadian Numbering Administration Consortium (CNAC)

The Canadian Numbering Administration Consortium Inc. (CNAC) was formed in 1998, under the regulatory authority of the Canadian Radio-television & Telecommunications Commission (CRTC), to oversee numbering administration activities in Canada. CNAC is an incorporated entity with a Board of Directors, and shares held by many Canadian Telecommunications Service Providers (TSPs). The primary function of CNAC is to oversee and fund the numbering administration activities of the Canadian Numbering Administrator (CNA).

CRTC Interconnection Steering Committee (CISC)

The CISC is a committee comprised of various industry representatives that facilitates the implementation of Telecom Decision CRTC 97-8 Local Competition and related Commission decisions. The mandate of the CISC is to undertake tasks related to technological, administrative and operational issues on matters assigned by the CRTC or originated by the public, that fall within the CRTC's jurisdiction.

Canadian Steering Committee on Numbering (CSCN)

The CSCN is an open public forum established in 1991 to consider and resolve numbering resource issues. It became a subtending Working Group of the CISC in 1998. In addition to the mandate defined in Appendix 1, Item 6, of the *CISC Administrative Guidelines*, the CSCN is responsible for:

1. Developing number planning and implementation strategies for the Canadian telecommunications industry;
2. Ensuring the equitable assignment of numbering resources in a competitive Canadian telecommunications industry environment;
3. Ensuring that adequate and appropriate numbering resources are always available for Canadian public telecommunication services and customers;
4. Ensuring that the administration of numbering resources does not confer an undue advantage on any entity nor inhibit the timely introduction of new telecommunication services or competition in these services in Canada;
5. Ensuring the efficient, effective and equitable use of numbering resources in Canada including the assignment, administration, forecasting and conservation of these resources;
6. Providing input and support about Canadian numbering practices to the CRTC via the CISC process;
7. Promoting CISC-agreed positions on numbering issues in the North American telecommunications industry fora; and,
8. Recommending to the CRTC, via the CISC process, allocations of numbering resources for the Canadian telecommunications industry.

Canadian Numbering Administrator (CNA) Organization

The mandate of the Canadian Numbering Administrator (CNA) is to provide a numbering administration service to the Canadian telecommunications industry under contract to the Canadian Numbering Administration Consortium Inc. The administration of Canadian numbering resources is under the regulatory oversight of the Canadian Radio-television and Telecommunications Commission (CRTC).

Effective January 1, 2019, the CNA operates via a division of COMsolve Inc. Kelly T. Walsh serves as the Program Manager of the CNA. The CNA office is located at 150 Isabella Street, Suite 605, Ottawa, ON, K1S 5H3.

Canadian Numbering Administrator Duties and Functions

CSCN Secretary

The CNA performs the duties of the CSCN Secretary in accordance with the *CSCN Adjunct to the CISC Administrative Guidelines* including:

1. Attends all meetings and conference calls of the full CSCN and records the attendance and the proceedings of all such CSCN meetings and conference calls;
2. Maintains centralized files, including logs, of all CSCN documents;
3. Maintains a current and accurate CSCN participant distribution list;
4. Prepares and ensures the timely distribution of the full CSCN meeting minutes;
5. Performs such other duties as may be prescribed from time to time by the CSCN; and,
6. Sends CSCN Minutes, Agendas and other documents identified by the CSCN for posting to the CRTC CISC Website.

Central Office (CO) Code Administration including NPA Relief Planning

The CNA performs CO Code administration functions in accordance with the *Canadian Central Office Code (NXX) Assignment Guideline* (Canadian COCA Guideline) for geographic Number Plan Areas (NPAs – i.e., Area Codes) assigned for use in Canada including NPA Relief Planning functions in accordance with the *Canadian NPA Relief Planning Guideline* and the *Canadian Adjunct to the INC NPA Allocation Plan and Assignment Guidelines*.

The CNA also performs CO Code administration functions in accordance with the *Canadian NPA 600 NXX Code Assignment Guideline* and the *Canadian Non-Geographic Code Assignment Guideline* for non-geographic NPAs assigned for use in Canada (i.e., 6YY).

CNA Role in NANPA Administered Resources

The CNA performs the following tasks with respect to North American Numbering Plan (NANP) number resources, which are controlled by the North American Numbering Plan Administrator (NANPA):

1) Receives, validates and forwards applications from Canadian entities to NANPA for assignment of:
   a. NPA Codes;

  b. ~~International Inbound NPA 456 NXX Codes[1]~~;
  c. NPA 9YY NXX Codes;
  d. NPA 800 855-XXXX line numbers; and
  e. Carrier Identification Codes (CICs).

2) Reclaims resources in certain circumstances.

Administration of Canadian Numbering Resources

The CNA performs the following administrative tasks:

1) Receives, validates and processes requests and maintains records for Non-Geographic Code Assignments (e.g., 555 line numbers, NPA 600 NXX Codes, NPA 6YY, NPA 9YY and PCS 5YY resources), International Mobile Station Identity (IMSI) Codes/Mobile Network Codes (MNCs), System Identifier Codes (SIDs); Emergency Service Routing Digit (ESRD) Blocks and MIN Block Identifier (MBI) Codes;
2) Maintains and publishes lists containing assignment information for Canadian numbering resources and approved Implementation Plans & Notices for N11 codes in Canada;
3) Prepares and publishes a CNA Annual Report on the status of Canadian numbering resources;
4) Seeks clarification of guidelines approved by CRTC and/or the Alliance for Telecommunications Industry Solutions (ATIS) Industry Numbering Committee (INC) from the CSCN, CRTC staff or CRTC, as necessary;
5) Provides 'on request' reports to CSCN related to various numbering topics and data;
6) Provides clarification to interested parties with respect to the application of numbering resource guidelines, CRTC and Innovation, Science and Economic Development (ISED) regulations applicable in Canada;
7) Participates in the CNA performance review process;
8) Investigates number assignment and administration issues, as necessary;
9) Seeks resolution, as necessary, from CSCN, CRTC staff or CRTC of number assignments and administration issues (including, but not limited to, frequency, format and content of NRUFs; Relief NPA selection; liaising with other numbering forums in North America);
10) Participates in and provides supporting data to the CSCN and CSCN Contribution Development Teams on request;
11) Liaises and coordinates the CNA's activities with NANPA to ensure effective and efficient use of NANP resources in Canada;
12) Establishes and maintains relationships with Innovation, Science and Economic Development Canada (formerly, Industry Canada) and the CRTC;
13) Develops and maintains knowledge of numbering activities at the INC and assesses the impacts of any INC activities on Canadian numbering administration and CNA functions;

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[1] In 2017, the Industry Numbering Committee (INC) investigated the use of this resource in their networks and determined that there was no longer a need for NPA 456. INC agreed to sunset the ATIS-0300049, International Inbound NPA (INT/NPA/NXX) Assignment Guidelines and age NPA 456 for five years before the NPA is returned to the general-purpose code pool. On 21 January 2019, the CRTC issued Telecom Decision CRTC 2019-16 which followed the INC Decision and, accordingly, NPA 456 numbers are no longer assignable in Canada.

14) Responds to requests from entities, including but not limited to, participants in the Canadian telecommunications industry, Innovation, Science and Economic Development Canada, the CRTC and the media about Canadian numbering resources and their administration;
15) Is the primary repository for numbering resource information for the Canadian telecommunications industry; and,
16) Communicates, orally and in writing, in both official languages, English and French.

CSCN Secretary

All the CSCN secretary activities were carried out as required. With the COVID-19 pandemic during 2020, the CSCN was only able to conduct one, one-day face-to-face full CSCN meeting, for which the CNA recorded the minutes and uploaded documentation. The meeting for CSCN 116 was held on 19 February.

The remaining 2 full CSCN sessions were split up into separate teleconference calls on the following dates:

- CSCN 117 (six teleconference calls) on 20 May, 21 May, 25 May, 27 May and 28 May; and
- CSCN 118 (one teleconference call) on 14 October.

Table 1 – Summary of 2020 Full CSCN Sessions

Date	CSCN Session
19 February 2020	CSCN 116 - Toronto
20 May 2020, 21 May 2020, 25 May 2020, 27 May 2020, and 28 May 2020	CSCN 117 (6 teleconference calls)
14 October 2020	CSCN 118 (1 teleconference call)

Copies of the meeting minutes are located at https://www.crtc.gc.ca/cisc/eng/cisf3fa.htm#MINUTES.

In addition to the regular full session CSCN face-to-face meetings, CSCN Secretary-recorded minutes and updated documentation for the following CSCN teleconferences[2]:

Table 2 – Summary of 2020 CSCN Teleconferences

Date	Meeting Topic
17 January 2020	TIF 105
5 February 2020	CSCN 116 Agenda & TIF 105
26 February 2020	TIF 106
13 May 2020	CSCN 117 Agenda
11 June 2020	TIF 104
17 June 2020	TIF 105

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[2] NRUF result and RPC calls are recorded elsewhere in this annual report. See Tables 7 and 8.

Date	Meeting Topic
29 July 2020	TIF 104
10 August 2020	TIF 104
26 August 2020	TIF 104
9 September 2020	TIF 104
30 September 2020	CSCN 118 Agenda
10 November 2020	TIF 104
24 November 2020	TIF 104
8 December 2020	TIF 104

CSCN Chair

The CSCN Chair is required to chair all CSCN meetings and teleconferences and attend all CISC Steering Committee meetings and teleconferences as well as prepare and present reports to the CISC concerning CSCN activities. CNA staff also participated the following CISC meetings:

Table 3 – Summary of 2020 CISC Meetings Attended

Date	Meeting Type
15 January 2020	Email Walkaround
17 April 2020	Email Walkaround
23 July 2020	Email Walkaround
15 October 2020	Teleconference
26 November 2020	Email Walkaround

One of the CISC meetings required reports on behalf of the CSCN Chair.

Central Office (CO) Code Administration

Canada is a member of the NANP. NANP telephone numbers are in the format NXX-NXX-XXXX where N is equal to 2 through 9 and X is equal to 0 through 9. The first NXX in a telephone number is the Numbering Plan Area (NPA) Code (i.e., Area Code), the second NXX is the CO Code and the XXXX is the line number.

When an eligible TSP in Canada requires the assignment of a block of telephone numbers, an application is made to the CNA for the assignment of a CO Code and its associated 10,000-line numbers. The CNA reviews the application to ensure that the service provider is eligible for the assignment of the CO Code in accordance with the CRTC-approved Canadian COCA Guideline. Once it is determined that the applicant has met all eligibility criteria and the application is completed with the correct data, a CO Code is selected and the data is entered into the Canadian Numbering Administration System (CNAS) and the iconectiv® TruOps Telecom Routing Administration (TRA) Business Integrated Routing & Rating Database System (BIRRDS) Assigned Code Record (ACD) screen. After the data is entered, the applicant is officially notified of the assignment using a Part 3 form. A Part 4 form is submitted to the CNA once the CO Code has been placed in service by the Code Holder. The CNA subsequently updates the CNAS. The CO Code listings are updated daily on the CNA website at https://www.cnac.ca/co_codes/co_code_status.htm.

The Canadian COCA Guideline, which was developed by the CSCN and approved by the CRTC, may be found at https://www.crtc.gc.ca/cisc/eng/cisf3fg.htm.

An applicant is never denied the assignment of a CO Code due to the improper completion of an application. CNA staff members work with the applicant until the application is completed correctly. However, in 2020, nine applications were denied or cancelled because the applicants did not respond to the CNA's requests for additional documentation, had not obtained CRTC staff approval within the fourteen-calendar day processing period allowed by the Canadian COCA Guideline, had cancelled the application or was denied because the applying entity was on the CNAC suspended list.

The following table lists the CO Code Administration activity by month in 2020. It should be noted that all CO Code administration activities were completed within the timeframes stipulated in the Canadian COCA Guideline. The average time to process a CO Code application in 2020 was

Table 4 – Summary of CO Code Administration Activity in 2020

Month	Part 1 Initial/Growth	Part 1 Update	Bulk A	Bulk B	Reclaimed	Other
January	60	33	0	0	3	0
February	69	8	0	0	4	0
March	43	45	0	0	2	0
April	46	2	0	0	1	0
May	75	0	0	0	5	0
June	65	4	0	0	0	1
July	83	18	0	0	0	2
August	122	31	0	0	0	1
September	113	9	0	0	0	3
October	106	6	0	0	0	1
November	58	11	0	0	0	0
December	91	19	0	0	0	1
2020 Total	**931**	**186**	**0**	**0**	**15**	**9**

The following table summarizes CO Code Administration annually from 2001 to 2020.

Table 5 – Summary of Historical CO Code Administration

Year	Part 1 Initial/Growth	Part 1 Update	Bulk A	Bulk B	Reclaimed	Other
2001	572	305	110	374	112	56
2002	358	290	0	192	56	68
2003	335	343	0	64	30	21
2004	453	280	13	45	44	88
2005	649	259	116	0	40	30
2006	933	359	330	55	51	41
2007	1028	254	42	0	90	61
2008	992	198	10	0	131	28
2009	645	163	105	19	76	12
2010	1022	180	15	41	54	20
2011	808	214	149	56	29	7
2012	829	122	112	23	27	13
2013	808	134	0	104	48	33
2014	687	167	108	117	63	13
2015	869	103	53	63	36	15
2016	1572	145	150	0	32	17
2017	1149	261	486	0	52	42
2018	1582	186	213	0	12	7
2019	837	723	0	0	55	18
2020	931	186	0	0	15	9

Part One Initial/Growth applications are the quantity of CO Code Applications processed by the CNA that resulted in the assignment of new CO Codes. These would include applications for Initial, Additional Codes for Growth or Additional Codes for a Unique Purpose.

Part One Update applications are the quantity of CO Code Applications processed by the CNA to update data in the CNAS and the ACD screens. These applications are made using Part 1 - CO Code Assignment, Reservation, Information Change, or Return forms detailing the appropriate changes for the affected CO Code. This process includes changes such as, but not limited to, the OCN, switching entity/POI and Rate Center name.

Part One Bulk A applications are the quantity of CO Code Applications processed by the CNA that are received in volume and require a significantly reduced level of effort to process, compared to the Part 1 applications discussed above. The CNAC Board has agreed that Bulk A applications will meet the following criteria:

- A Part One Application is required in accordance with the *Canadian Central Office Code (NXX) Assignment Guideline*;
- The Assigned Code Record (ACD) screen must be opened;
- One or two identical changes to the same data element;
- No error checking on the part of the CNA is required;
- Applications relate to updated information only;

- There must be at least ten NXXs involved; and,
- The normal fourteen calendar day processing time does not apply.

Part One Bulk B applications are the quantity of CO Code Applications that are processed by the CNA and are received in volume and meet the following criteria as agreed to by the CNAC Board:

- A Part One Application is required in accordance with the *Canadian Central Office Code (NXX) Assignment Guideline*;
- The Assigned Code Record (ACD) screen must be opened;
- Three or more changes to the same data elements are required; or
- Identical changes to three or more data elements are required; or
- Differing changes made to three or more or numerous data elements are required;
- Error checking is provided by the CNA;
- Applications relate to updated information only;
- There must be at least ten NXXs involved; and,
- The normal fourteen calendar day processing time does not apply.

Part One Recovered CO Code applications are the quantity of CO Code Applications processed by the CNA to reclaim CO Codes for the following reasons:

a) The CO Code is no longer required by the Code Holder for the purpose originally assigned;
b) The service for which the CO Code was assigned is discontinued;
c) The CO Code Holder has ceased operation;
d) The CO Code was assigned, but not used in conformance with the *Canadian Central Office Code (NXX) Assignment Guideline*; or
e) The CO Code was not placed In-Service within the time frame specified in the *Canadian Central Office Code (NXX) Assignment Guideline*.

These applications are made using Part 1 - CO Code Assignment, Reservation, Information Change, or Return forms or through the CO Code reclamation process.

The "Other" column generally represents Cancelled, Suspended or Denied CO Code applications tracked as miscellaneous by the CNAS performance tracking.

Numbering Resource Utilization Forecast (NRUF)

Each NPA Code contains approximately 760 to 780 assignable CO Codes, depending on the NPA. The CNA is required to determine the approximate date when all assignable CO Codes will exhaust in each NPA to begin NPA relief planning activities to ensure that enough telephone numbers and CO Codes remain available for assignment prior to the introduction of a new NPA. This is achieved by conducting the annual NRUF.

In accordance with the *Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline*, during the fourth quarter of each year the CNA requests all existing and prospective CO Code Holders to complete the General Numbering Resource Utilization Forecast (G-NRUF) worksheet and return it to the CNA by February for analysis. On the worksheet, the Code Holders list the number of CO Codes, by NPA,

that are assigned to them as well as forecast the number of CO Codes they expect to require, by NPA, in each of the next six years.

During the CNA's analysis of the data provided on the worksheets, any discrepancy between the CNA database and the number of assigned CO Codes that the Code Holder has indicated on the worksheet is discussed with the Code Holder to ensure that the data is correct. The CNA also scrutinizes the Code Holder's forecast data to compare it against previous years' forecasts to detect any large deviations. The CNA contacts the Code Holder to determine why the deviation has occurred and to ensure that no errors were made. Additionally, the CNA verifies any forecasts from new entrants that appear to be inflated. The CNA discusses the forecast with the new entrant and offers educated assistance to ensure that the forecast is valid. Any large discrepancies or unusual forecasts are reported to CRTC staff for their information and action before the final aggregate data is posted on the CNA website and presented to the CSCN. The CNA meets with CRTC staff meet to discuss the NRUF results in detail before they are released to the CSCN and NANPA.

On 13 December 2019, the CNA requested all existing and prospective CO Code Holders to provide their year 2020 G-NRUF to the CNA by 01 February 2020. The aggregate G NRUF data was reviewed with CRTC staff before it was posted to the CNA website on 24 March 2020. It was then presented to the CSCN and forwarded to the NANPA.

When the G-NRUF indicates that an NPA will exhaust within or at about 72 months (the Relief Window), the CNA informs CRTC staff, who normally initiate the publication of a CRTC Notice of Consultation. The Notice is used to inform the public that NPA relief is required and solicits interested parties to be part of the NPA Relief Planning Committee. Subsequently, the CNA NPA Relief Planning Co-ordinator conducts a Relief NRUF (R-NRUF), which is similar to the annual G-NRUF except that existing CO Code assignments and the forecast CO Code requirements are generally reported at the exchange area level of detail and at six-month intervals, depending on the applicable CRTC determination and requirements set by the Relief Planning Committee (RPC).

When NRUF results indicate that the forecast demand for CO Codes in an NPA exceeds the supply of CO Codes under situations described in Section 9.1 of the *Canadian NPA Relief Planning Guideline*, a Jeopardy Condition is declared. Under a Jeopardy Condition, the CNA conducts quarterly Jeopardy NRUFs (J-NRUFs). In the event of a J-NRUF, Code Holders and prospective Code Holders submit two versions of their forecast – one that includes code assignment restrictions based on the Jeopardy Contingency Plan and one that includes no code assignment restrictions. In 2020, NPA 306/639 was in a Jeopardy Condition.

In cases where detailed forecasts of a CO Code growth for a particular NPA is required in circumstances other than those covered by the other types of NRUFs, a Special NRUF (S-NRUF) may be conducted.

During 2020, based on G- and R-NRUF results from January and July 2020, the following NPAs were forecast to exhaust within the Relief Window and were being monitored with semi-annual R-NRUFs:

- 204/431 (Manitoba)
- 249/705 (North-Central Ontario)
- 289/365/905 (Southern Ontario)
- 306/639 (Saskatchewan)

- 343/613 (Eastern Ontario)
- 403/587/780/825 (Alberta)
- 416/437/647 (Metro Toronto)
- 438/514 (Metro Montréal)
- 450/579 (Suburban Montréal Area)
- 506 (New Brunswick)
- 709 (Newfoundland and Labrador)
- 819/873 (Northern and Western Québec)

During 2020, the CNA conducted R-, J- or S-NRUFs for the above NPAs as indicated in the following table. In addition, the G-NRUF activity is also indicated.

Table 6 – Summary of 2020 NRUFs

NRUF Type	Due Date	NPAs/Complexes
G-NRUF	2 February 2020	All geographic NPAs (excluding exhausting NPAs)
G-NRUF	2 February 2020	Non-Geographic NPAs using numbers in NPAs 5XX, 600, 6YY and 9YY
R-NRUF	2 February 2020	NPA Complexes 249/705, 289/365/905, 306/639, 343/613, 403/587/780/825, 416/437/647, 438/514, 450/579, 506, 709 and 819/873
S-NRUF	15 July 2020	NPA Complex 306/639
R-NRUF	31 July 2020	NPA Complexes 204/431, 249/705, 289/365/905, 343/613, 403/587/780/825, 416/437/647, 438/514, 450/579, 506, 709 and 819/873
J-NRUF	15 October 2020	NPA 306/639

All the 2020 NRUF results may be found at https://www.cnac.ca/NRUF/NRUF.htm#Results.

There were four conference calls held to review NRUF results in 2020 and are as follows:

Table 7 – Summary of 2020 NRUF Results Conference Calls

Date	Committee	Description
1 April 2020	RPCs & CSCN	All January 2020 NRUF results
5 August 2020	NPA 306/639 RPC & CSCN	July 2020 S-NRUF results
27 August 2020	RPCs & CSCN	July 2020 R-NRUF results
2 November 2020	NPA 306/639 RPC & CSCN	October 2020 J-NRUF results

NPA Relief Planning

NPA relief planning is a public process that is described in the *Canadian NPA Relief Planning Guideline*, which may be found at https://www.crtc.gc.ca/cisc/eng/cisf3fg.htm. To increase public awareness and participation in the NPA relief planning process, the CRTC has determined that NPA Relief Planning Committees (RPCs) are to be established as ad hoc sub-committees of the CISC. The CNA is required to create and maintain NPA Relief Planning Committee distribution lists, which are frequently updated as participants in the relief planning process are not static.

The information provided by the various NRUFs is used in the development of relief options that are included in the Proposal for Relief of an Overlay [NPA] Complex (PROC) and the Initial Planning Documents (IPDs). The PROC or IPD is posted on the CNA website and a notification is sent to current and prospective CO Code Holders in the affected NPA and to any other party that the CNA believes should have an interest in the ensuing NPA relief activities (e.g., municipalities, public interest groups and the Canadian Security Association). Parties are invited to submit contributions suggesting other relief planning options and to attend the first RPC meeting.

In 2020, there were 10 RPC meetings held, some of which were joint RPC/CSCN meetings). The following table identifies the RPC meetings[3] held which were not related to NRUF results:

Table 8 – Summary of 2020 RPC Meetings

Date	Committee	Description
9 June 2020	NPA 506 RPC	Review a revised RIP and TIF Report contribution
10 June 2020	NPA 709 RPC	Review a revised RIP and TIF Report contribution
29 June 2020	NPA 289/365/905 RPC	Review and finalise the Planning Document, RIP and TIF Report #1
8 October 2020	NPA 403/587/80/825 RPC	Review contribution for a proposed revision to the relief schedule, RIP and TIF Report #3
16 November 2020	NPA 306/639 RPC & CSCN	Review NITF and CATF Progress Report #1
18 November 2020	NPA 289/365/905 RPC	Review contribution for a proposed revision to the relief schedule

The initial and all subsequent RPC meetings are chaired by the CNA, which also supplies the NPA Relief Planning Co-ordinator and the RPC secretary.

At the initial meeting, IPDs/PROCs are discussed in detail so the Committee members can become familiar with the NPA from a geographic, demographic, Exchange Area and NRUF point of view. Additionally, the Relief Options contained in the IPD (if applicable) are discussed in detail as are any contributions received by the CNA from any interested party.

During the RPC meetings, the Committee modifies the IPD/PROC or an interested party contribution to become the Planning Document (PD). The Committee will normally come to consensus on a recommended Relief Option. Where an IPD is utilized, the recommended relief option will be compared to other relief options either proposed in the IPD or considered by the RPC and this comparison will be included in the PD, which is forwarded to the CRTC via the CISC process.

During 2020 the CNA chaired, supplied a Secretary and Relief Planner and prepared minutes for the RPC meetings.

The RPC Chair also prepared one report concerning the ad hoc relief planning committees' activities for the CISC.

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[3] NRUF result calls are recorded elsewhere in this annual report. See Table 7.

CNA Role in NANPA Controlled Resources

In addition to NPA Codes, the NANP contains other numbering resources. These numbering resources are also assigned to Canadian telecommunications entities by the NANPA via the CNA. Applications for these resources are received by the CNA and reviewed for accuracy and to ensure that the applicant meets Canadian regulatory requirements. Complete and correct applications are forwarded to the NANPA along with a recommendation for assignment. The CNA will deny the assignment of these resources and return the application where the applicant does not meet Canadian regulatory requirements or the requirements of the applicable assignment guideline or its Canadian adjunct. No application is rejected because it is not completed correctly unless it is impossible to acquire the necessary information from the applicant. The CNA works with the applicant until the application is properly completed. Once the NANPA has assigned a code, it is forwarded to the CNA who informs the applicant of the assignment. The CNA acts as the Canadian telecommunications industry liaison with the NANPA.

The CNA keeps a separate listing of most resources assigned to Canadian entities along with links to the associated Canadian guidelines, Industry Numbering Committee assignment guidelines and the associated Canadian Adjunct to those guidelines. These items may be accessed through the CNA website at https://www.cnac.ca/ by using the "Numbering" drop-down menu item.

The CNA is required to receive, validate and forward applications from Canadian entities to NANPA for assignment of the following resources:

- NPA Codes;
- PCS/N00 NXX Codes (NPA 500 NXXs) reserved for Canadian entities;
- NPA 9YY NXX Codes;
- NPA 800 855-XXXX line numbers; and
- Carrier Identification Codes (CICs).

One NPA Code (742) was assigned in 2020 bringing the total quantity of Canadian Geographic NPAs assigned as of 31 December 2020 to 47.

During 2020, the following NANPA controlled resource activity occurred:

Table 9 – Summary of 2020 NANPA Controlled Resource Activity

NANPA Resource	New Codes	Updated Codes	Recovered Codes
NPAs	1	n/a	0
NPA 500 NXXs	0	0	0
NPA 9YY NXXs	0	0	0
NPA 800 855-XXXX	0	0	0
CICs	0	27	0

CNA Role in iconectiv® Controlled Resources

In addition to the NANPA controlled resources, SS7 resources are assigned to Canadian telecommunications entities by iconectiv with the assistance of the CNA. iconectiv is under contract by the American National Standards Institute (ANSI) to administer these resources in North America.

Applications for these resources are submitted online to iconectiv and require an upfront fee payment before the application is processed. Most applicants require the CNA's assistance to determine if they require a Small Network Code or a Network Code Block and to determine if they meet the regulatory requirements to be eligible for an assignment. The CNA is normally required to assist new applicants to locate the SS7 related website and complete the online form. Once iconectiv has assigned a code, notice of its assignment is forwarded to the CNA and the applicant. The CNA acts as the Canadian telecommunication industry liaison with iconectiv.

A description of SS7 Network Codes and the Global Title Translation (GTT) Point Code Industry Notification Process, which is facilitated by CRTC staff, may be accessed through the CNA website at https://www.cnac.ca/ by using the "Numbering" drop-down menu item. It should be noted that a list of these resources does not currently appear on the CNA website at the request of the industry.

Other Administration Activities

Other Canadian Numbering Resources

The CNA is required to receive, validate and process requests and maintain records of other Canadian administered numbering resources. A description of these resources and a listing of assignments may also be found on the CNA website at https://www.cnac.ca/ by using the "Numbering" drop-down menu item for the following resources:

- 600 NXX Codes
- Canadian Emergency Service Routing Digit (ESRD) Blocks
- Canadian MIN Block Identifier (MBI) Codes
- System Identifier Codes (SIDs)
- Mobile Network Code (MNC) portion of International Mobile Station Identifier Codes (IMSIs)
- Canadian Non-Geographic Code numbering resources (6YY NXX)

During 2020, the following other Canadian Numbering resource activity occurred:

Table 10 – Summary of 2020 Other Canadian Numbering Resource Activity

Resource	New Codes	Updated Codes	Recovered Codes
600 NXXs	0	0	0
ESRD Blocks	30	0	53
MBI Codes	227	3	30
SIDs	0	0	0
MNCs	2	2	2
6YY NXXs	110	0	0

Industry Fora Participation

CSCN

CNA staff members participated at the CSCN in reviewing contributions associated with the following TIFs during 2020:

- TIF 104 - *Update Canadian International Mobile Subscription Identity (IMSI) Assignment Guideline*
- TIF 105 - Review of the relief planning and number forecast processes associated with Relief of an Overlay NPA Complex
- TIF 106 - Streamline the Central Office Code (NXX) Assignment Request and Confirmation Forms
- TIF 107 - Update the *Canadian Emergency Service Routing Digit (ESRD) Block Assignment Guideline*
- TIF 108 - Update the Appendix B – Months to Exhaust Certification Worksheet

In August 2020, the CNA also provided a contribution to the CSCN to address the 2021 NRUF process.

CIGRR

To ensure that the CNA is up to date with CSCN activities and to ensure that the CSCN can develop and modify number assignment guidelines, the CNA attends a number of industry fora in the US. The CNA attended Common Interest Group on Routing and Rating (CIGRR) meetings to ensure that the Canadian industry is aware of rating and routing changes in the US that affect Canada and Canadian assignment guidelines. Due to the COVID-19 pandemic, the CNA attended the following CIGRR meetings in 2020 as teleconference calls:

Table 11 – Summary of 2020 CIGRR Meetings Attended

Date	Meeting
12 March 2020	CIGRR Full Session
22 July 2020	CIGRR Full Session
21 October 2020	CIGRR Full Session Conference Call
16 September 2020	Task item C263 - CIGRR Charter Review
11 August 2020	Task item C263 - CIGRR Charter Review
5 November 2020	Task item C262 - Review Fields on SHA to Determine if Still Needed

Canadian CIGGR

The Canadian Common Interest Group on Routing and Rating (CIGRR) was implemented to ensure that the Canadian industry is aware of rating and routing changes in the US that affect Canada, and to develop Canadian-only solutions to rating and routing issues. The CNA attended the following meetings during 2020:

Table 12 – Summary of 2020 Canadian CIGRR Meetings Attended

Date	Meeting
19 March 2020	Canadian CIGRR Full Session
17 September 2020	Canadian CIGRR Full Session

INC

The CNA is required to develop and maintain knowledge of numbering activities at the [ATIS] Industry Numbering Committee (INC) and assess the impacts of any of their activities on Canadian numbering administration processes and CNA functions. The CNA (through COMsolve) maintains an ATIS membership and receives all INC working group related correspondence, submissions and draft

proposals. The CNA attended one face-to-face INC meeting in 2020 in person and several by teleconference. The CNA delivered four summaries of INC issues that could affect Canadian assignment guidelines to the CSCN following all INC general meetings. The CNA attended the following INC teleconference calls during 2020:

Table 13 – Summary of 2020 INC Meetings Attended

Date	Meeting
5-6 February 2020	INC-168 (Full Session)
15 April 2020	Joint Committee Conference Call (Company Code Reclamation)
11 May 2020	INC 169 Part 1 of 4 (Virtual)
13 May 2020	INC 169 Part 2 of 4 (Virtual)
18 May 2020	INC 169 Part 3 of 4 (Virtual)
20 May 2020	INC 169 Part 4 of 4 (Virtual)
3 June 2020	Issue 891 – Conference Call (Update TBCOCAG – Expedited CO Code Activation and change in Porting/Pooling Status)
8 July 2020	INC 170 Part 1 of 4 (Virtual)
13 July 2020	INC 170 Part 2 of 4 (Virtual)
15 July 2020	INC 170 Part 3 of 4 (Virtual)
20 July 2020	INC 170 Part 4 of 4 (Virtual)
21 September 2020	INC 171 Part 1 of 2 (Virtual)
28 September 2020	INC 171 Part 2 of 2 (Virtual)
10 December 2020	INC 172 (Virtual)

Website

The CNA is required to establish and maintain a public Internet website. The CNA website contains numbering information, which is unique to Canada, and generally it does not duplicate information that is available on the NANPA website. The CNA website provides a brief description of the information that is contained on the NANPA website, including the NANPA Internet website address.

The following information is available on the CNA Internet website at https://www.cnac.ca/ :

1. CNA mandate, mailing address, contact names, telephone and facsimile numbers, and email addresses;
2. Canadian Numbering Administration Consortium (CNAC) background, mailing address, contact names, telephone and facsimile numbers, and email addresses;
3. Canadian Geographic NPA Information including a Map of Canada showing Canadian geographic NPAs and a list of CO Codes and the status of each (e.g., assigned, reserved, protected, test, available) in a downloadable spreadsheet file format;
4. Canadian Non-Geographic NPA and CO Code information. Non-Geographic NPA CO Codes are not associated with Exchange Areas and cannot be shown on a map. A list of Non-Geographic CO Codes and the status of each (e.g., assigned, reserved, protected, test, available) in a downloadable spreadsheet file format is available;
5. A list of Canadian National Numbering Resources;
6. Unique CRTC-approved Number Resource Assignment Guidelines, including the *CSCN Adjunct to the CISC Administrative Guidelines* and links to the CRTC website;

7. List of INC Number Resource Assignment Guidelines which apply in Canada plus the address of the website where copies may be obtained;
8. Other CNA information or reports as directed by CNAC and the CRTC;
9. CNA Annual Reports;
10. CSCN Information;
11. CSCN Membership List including company name, contact name, mail address, telephone and facsimile number, and email address;
12. Current Schedule of CSCN meetings and conference calls;
13. Most recent Draft CSCN Meeting Minutes;
14. Applicable NPA Relief Planning documentation; and,
15. Historical NRUF results and the latest NRUF forms and instructions.

This information is updated on a timely basis when the CNA receives new information and at a minimum of once every week. In 2020 the website had the following statistics from Google analytics:

Table 14 – Summary of 2020 www.cnac.ca Website Analytics

Metric	Value
Sessions[4]	207,571
Pageviews[5]	335,418

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[4] **Session** - "The period of time a user is active on your site or app. By default, if a user is inactive for 30 minutes or more, any future activity is attributed to a new session. Users that leave your site and return within 30 minutes are counted as part of the original session." (https://support.google.com/analytics/answer/6086069?hl=en)

[5] **Pageview** - "A pageview (or pageview hit, page tracking hit) is an instance of a page being loaded (or reloaded) in a browser. Pageviews is a metric defined as the total number of pages viewed." (https://support.google.com/analytics/answer/6086080?hl=en)