

NPA 416/647 RELIEF PLANNING COMMITTEE (RPC)

TIF REPORT

Date Submitted: 16 May 2011
WORKING GROUP: NPA 416/647 Relief Planning Committee (Ad Hoc)
REPORT #: NPA 416/647 TIF Report #1
File ID: 416-647RE01A.doc
REPORT TITLE: Relief Planning Committee (RPC) Recommendation for
NPA 416/647 Relief (Planning Document)

OUTCOME: Consensus

RELATED TASK(s) #: None

BACKGROUND:

On 25 March 2010, the Canadian Numbering Administrator (CNA) announced that Number Plan Area (NPA) 416/647 had entered the relief planning window of 72 months according to the aggregate results from the 2010 General Numbering Resource Utilization Forecast (G-NRUF). The CNA advised the Canadian Radio-television and Telecommunications Commission (CRTC) and the telecommunications industry of this situation.

On 20 July 2010 the CRTC issued Telecom Notice of Consultation CRTC 2010-490, *Establishment of a CISC ad hoc committee for area code relief planning for area codes 416 and 647 in southern Ontario*, by which it established a CRTC Interconnection Steering Committee ad hoc relief planning committee (RPC) to examine options for providing numbering relief to the area served by area codes 416 and 647 in southern Ontario.

The July 2010 NPA 416/647 Relief Planning Numbering Resource Utilization Forecast (R-NRUF) results, when adjusted for the Central Office (CO) Codes set aside per Telecom Notice of Consultation CRTC 2010-490, indicated that NPA 416/647 would exhaust in October 2015. More recently, the January 2011 NPA 416/647 R-NRUF results, when adjusted for the Central Office (CO) Codes set aside per Telecom Notice of Consultation CRTC 2010-490, indicated that NPA 416/647 would exhaust in May 2015.

The January 2011 NPA 416/647 R-NRUF results, when adjusted for the CO Codes set aside per Telecom Notice of Consultation CRTC 2010-490, indicated that NPA 416/647 would exhaust in May 2015. Subsequent to these results being made public some Carriers have revised their forecasts which has advanced the Projected Exhaust Date to May 2014. The Relief Planning Committee agreed to use May 2014 as the Projected Exhaust Date in order to develop this Planning Document.

The objective of the NPA Relief Planning process is to ensure that Central Office (CO) Codes and telephone numbers are always available for use by Telecommunications Service Providers (TSPs) and their customers in the geographic area requiring relief.

The NPA 416/647 RPC is still working on the Relief Implementation Plan, which will be submitted in the near future.

RECOMMENDATIONS:

The NPA 416/647 RPC hereby submits the attached NPA 416/647 Planning Document for Commission approval. Copies are also being submitted to the CRTC Interconnection Steering Committee (CISC).

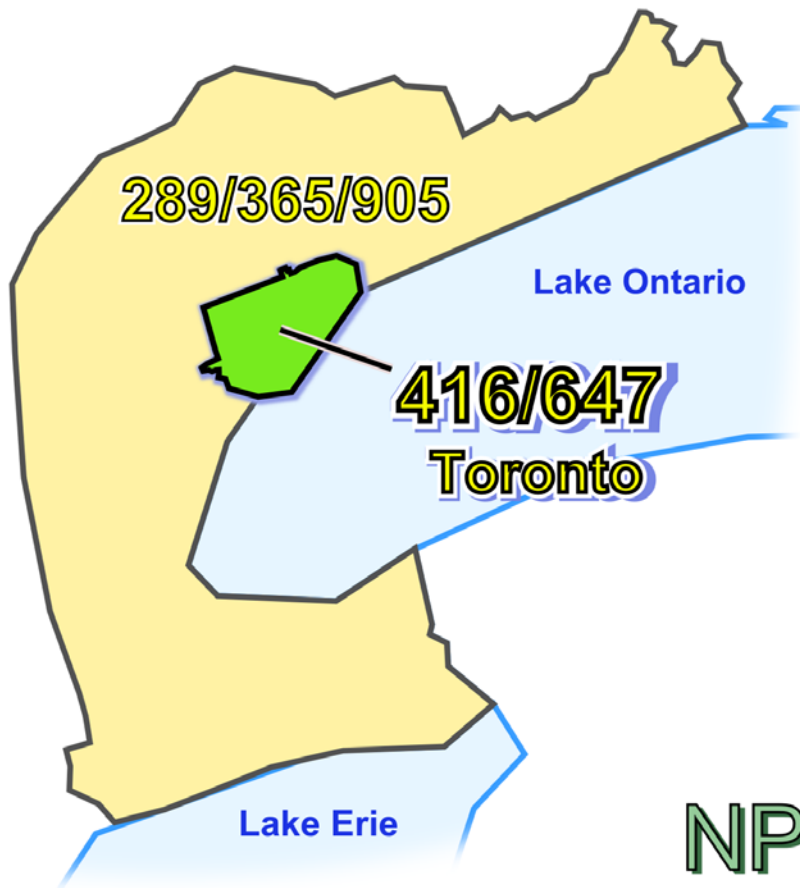
In the attached Relief Planning Document, the RPC makes several recommendations including but not limited to the following.

- 1) The Relief Method should be a distributed overlay of a new NPA Code on NPA 416/647 (Option 2);
- 2) NPA Code 437 should be used for the Relief NPA Code for NPA 416/647;
- 3) The Relief Date should be 25 March 2013, to coincide with the CRTC-approved NPA 289/905 Relief Implementation Date;
- 4) NPA Code 387 should be reserved for subsequent relief in the 416/437/647 region.

These recommendations are described in more detail in the appropriate sections of the NPA 416/647 Planning Document.

ATTACHMENTS:

NPA 416/647 Planning Document, dated 16 May 2011



NPA 416/647 Relief Planning

Planning Document (PD)
Version 1.0 – May 16, 2011

Canadian Numbering Administrator (CNA)
Suresh Khare
613-683-3296
60 Queen Street, Suite 1516
Ottawa, Ontario K1P 5Y7
khares@saiccanada.com


From Science to Solutions



TABLE OF CONTENTS

1.	INTRODUCTION.....	1
2.	NPA RELIEF PLANNING PROCESS	3
3.	NPA RELIEF METHODS.....	4
4.	NPA EXHAUST INFORMATION	5
5.	RELIEF METHODS & OPTIONS.....	6
5.1	OPTION 1 – NPA CODE 365 BOUNDARY EXTENSION OVERLAY	7
5.2	OPTION 2 - DISTRIBUTED OVERLAY OF NEW NPA CODE ON NPA 416/647	7
6.	SUMMARY OF RELIEF OPTIONS.....	8
7.	ASSESSMENT OF RELIEF OPTIONS	9
8.	DIALLING IMPACTS FOR LOCAL CALLS	11
9.	CO CODES FOR INITIAL CODE ASSIGNMENTS AND CO CODES FOR INITIAL CODE ASSIGNMENTS FOR NEW ENTRANTS ONLY	12
10.	PROPOSED SCHEDULE	13
11.	JEOPARDY CONTINGENCY PLAN (JCP)	16
12.	SELECTION OF RELIEF NPA CODE.....	25
13.	RECOMMENDATIONS.....	27

CONTENTS OF ANNEXES

ANNEX A

- Figure 1 – Overview of NPA 416/647 and Adjacent NPAs
- Figure 2 – NPA 416/647 Actual and Forecast CO Code Assignments
- Figure 3 – NPA 416/647 CO Code Exhaust January 2010 G-NRUF
- Figure 4 – NPA 416/647 Miscellaneous and LEC+WSP CO Codes 2010 G-NRUF
- Figure 5 – NPA 416/647 CO Code Exhaust after release of Telecom Notice of Consultation CRTC 2010-490
- Figure 6 – NPA 416/647 Miscellaneous and LEC+WSP CO Codes after release of Telecom Notice of Consultation CRTC 2010-490
- Figure 7 – NPA 416/647 CO Code Exhaust January 2011 R-NRUF
- Figure 8 – NPA 416/647 Miscellaneous and LEC+WSP CO Codes January 2011 R-NRUF
- Figure 9 – Option 1: NPA Code 365 Boundary Extension Overlay
- Figure 10 – Option 2: Distributed Overlay of New NPA Code on NPA 416/647

ANNEX B

- Table 1 – Exchange Areas currently in NPA 416/647, and NPA Code 365 for these Exchange Areas after each Relief Plan

ANNEX C

Distribution List

Acronym List

CNA	Canadian Numbering Administrator
CISC	CRTC Interconnection Steering Committee
CO	Central Office
CRTC	Canadian Radio-television and Telecommunications Commission
G-NRUF	General Numbering Resource Utilization Forecast
IPD	Initial Planning Document
JCP	Jeopardy Contingency Plan
J-NRUF	Jeopardy Numbering Resource Utilization Forecast
NANP	North American Numbering Plan
NPA	Numbering Plan Area
NPA Codes	Area Codes
NRUF	Number Resource Utilization Forecasts
PD	Planning Document
PED	Projected Exhaust Date
POI	Point of Interconnection
RIP	Relief Implementation Plan
R-NRUF	Relief Planning Numbering Resource Utilization Forecast
RPC	Relief Planning Committee
TSPs	Telecommunications Service Providers

NPA 416/647 Planning Document (PD)

1. INTRODUCTION

The 416/647 Numbering Plan Area (NPA) consists of a single Exchange Area, Toronto, which is located in southern Ontario.

On 25 March 2010, the Canadian Numbering Administrator (CNA) announced that Number Plan Area (NPA) 416/647 had entered the relief planning window of 72 months according to the aggregate results from the 2010 General Numbering Resource Utilization Forecast (G-NRUF). The CNA advised the Canadian Radio-television and Telecommunications Commission (CRTC) and the telecommunications industry of this situation.

On 20 July 2010 the CRTC issued Telecom Notice of Consultation CRTC 2010-490, *Establishment of a CISC ad hoc committee for area code relief planning for area codes 416 and 647 in southern Ontario*, by which it established a CRTC Interconnection Steering Committee ad hoc relief planning committee (RPC) to examine options for providing numbering relief to the area served by area codes 416 and 647 in southern Ontario. The Notice of Consultation directed the RPC to set aside, at a minimum, 7 central office codes for initial code assignments for carriers already providing service in the area served by area codes 416 and 647, and 10 central office codes for initial code assignments exclusively for new entrants.

The July 2010 NPA 416/647 Relief Planning Numbering Resource Utilization Forecast (R-NRUF) results, when adjusted for the Central Office (CO) Codes set aside per Telecom Notice of Consultation CRTC 2010-490, indicated that NPA 416/647 would exhaust in October 2015.

The January 2011 NPA 416/647 R-NRUF results, when adjusted for the CO Codes set aside per Telecom Notice of Consultation CRTC 2010-490, indicated that NPA 416/647 would exhaust in May 2015. Subsequent to these results being made public some Carriers have revised their forecasts which has advanced the Projected Exhaust Date to May 2014. The Relief Planning Committee agreed to use May 2014 as the Projected Exhaust Date in order to develop this Planning Document.

The Initial Planning Document (IPD), dated 17 October 2010, was developed by the CNA in accordance with Telecom Notice of Consultation CRTC 2010-490 and the CRTC approved Canadian NPA Relief Planning Guideline (the Guideline) dated 2 June 2009. A copy of the Guideline is available from the CRTC CISC guidelines web page at <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm> or via a link from the CNA website at <http://www.cnac.ca>.

This Planning Document (PD) was developed by the RPC based on the IPD and in accordance with the CRTC-approved Canadian NPA Relief Planning Guideline (the Guideline) dated 2 June 2009. Various options for providing relief in the NPA 416/647 Numbering Plan Area are identified in this PD.

The purpose of identifying Relief Options, and the objective of the NPA Relief Planning process, is to ensure that CO Codes and telephone numbers are always available for use by Telecommunications Service Providers (TSPs) and their customers in the geographic area requiring relief.

Given the magnitude of this undertaking, inter-company commitment and co-operation are essential throughout the planning, provisioning and implementation stages of the introduction of a new NPA Code.

It is very important to closely monitor the CO Code requirements of all existing and prospective CO Code Holders so that relief can be timed to ensure that CO Codes and telephone numbers are always available for service providers and customers.

2. NPA RELIEF PLANNING PROCESS

The NPA Relief Planning process, and the roles of the participants (e.g., CRTC, CNA, CRTC Interconnection Steering Committee (CISC), RPC participants, Interested Parties) for NPA Relief Planning are identified in the CRTC-approved Canadian NPA Relief Planning Guideline (the Guideline), dated 2 June 2009.

A copy of the Guideline is available from the CRTC CISC guidelines web page at <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm> or via a link from the CNA website at <http://www.cnac.ca>.

To increase public awareness and participation in the NPA Relief Planning process, the CRTC has determined that NPA Relief Planning Committees (RPCs) will be established as ad hoc committees of the CISC. Generally, a separate ad hoc committee is created to deal with relief in each area code. The CNA, in its function as NPA Relief Planning Coordinator, acts as chair of these ad hoc committees. Meetings and conference calls of the ad hoc NPA RPCs are all open to public participation and are conducted in accordance with the CISC Administrative Guidelines.

A copy of the CISC Administrative Guidelines can be obtained from the CRTC website at <http://www.crtc.gc.ca/public/cisc/c-docs/CISC2001-03-31.doc>.

NPA Relief Planning is conducted under the regulatory oversight of the CRTC. Notwithstanding the process detailed in the Guideline, the CRTC may exercise its authority under the Telecommunications Act to alter this process at any time. The CRTC has the authority under the Telecommunications Act to review, modify and give final approval to the Planning Document (PD) and the Relief Implementation Plan (RIP) developed and submitted by the RPC to the CRTC via the CISC process.

Section 6.1.6 of the Canadian NPA Relief Planning Guideline requires the CNA to create and maintain a distribution list of parties who may be interested in participating in the RPC and to provide them with advance notice of the initial RPC meeting and the IPD.

Any person wishing to participate in the NPA Relief Planning process can contact the CNA and request to be added to the RPC distribution lists. In addition, individuals can also register with the CRTC as interested parties to any proceedings that result from the NPA Relief Planning process. More information on how to participate in CRTC public processes is available at: http://www.crtc.gc.ca/eng/info_sht/g4.htm.

A summary of Canadian geographic area code relief history is available at: www.cnac.ca/npa_codes/NPA_History.pdf.

3. NPA RELIEF METHODS

The three basic NPA Relief Methods (i.e., split, overlay and boundary realignment) are described in detail in section 5.0 of the Canadian NPA Relief Planning Guideline. The purpose of this section is to identify and briefly describe those methods. For additional details refer to the Guideline at: <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>.

The term Numbering Plan Area (NPA) refers to a discrete geographic area, within the area served by the North American Numbering Plan (NANP), to which one or more NPA Codes (also known as area codes) may be assigned (e.g., the city of Toronto is a Numbering Plan Area (NPA) to which NPA Codes 416/647 are assigned).

Split:

Under the Split method, the geographic area served by an existing NPA is generally divided or "split" into two or more unique geographic areas (i.e., two or more new Numbering Plan Areas or NPAs). One of the areas retains the existing NPA Code, and the other area(s) changes to a new NPA Code(s).

Overlay:

Under the Overlay method, a relief NPA Code is generally superimposed or "overlaid" on top of part or all of an existing NPA. With overlays, changes to existing customers' telephone numbers are not required. Four types of overlays are described in the Guideline as follows. Under the Distributed Overlay method, a new relief NPA Code is "overlaid" on top of all of an exhausting NPA. Under a Concentrated Overlay method, a new relief NPA Code is "overlaid" on top of part of an exhausting NPA (e.g., over a fast growing metropolitan area within an existing NPA). Under a Boundary Extension Overlay method, the boundary of an existing NPA that has spare capacity is extended to overlay part or all of an exhausting NPA. Under a Technology-Specific Overlay, a new NPA Code would be assigned to overlay an exhausting NPA and the numbering resources in the new NPA Code would be used only for a specific type of technology (e.g., wireline telephones, wireless telephones, facsimile).

Boundary Realignment:

Under the Boundary Realignment method, the boundary between the NPA that requires relief and an adjacent NPA are modified such that some of the customers in the exhausting NPA have their telephone numbers changed by being given telephone numbers in a different NPA Code in the adjacent NPA.

Once the necessity for NPA Code relief is established, all NPA Code relief methods are considered.

4. NPA EXHAUST INFORMATION

As indicated in the following table, Number Resource Utilization Forecasts (NRUFs) for NPA 416/647 were used to determine Projected Exhaust Dates, i.e. the dates when CO Codes in NPA 416/647 would be expected to exhaust.

NRUF	Projected Exhaust Date
G-NRUF January 2009	October 2021
G-NRUF January 2010	July 2015
R-NRUF July 2010 (adjusted per Telecom Notice of Consultation CRTC 2010-490 directive to set aside 7 CO Codes for initial code assignments for Carriers already providing service, and 10 for initial code assignments for new entrants)	October 2015
R-NRUF January 2011 (adjusted per Telecom Notice of Consultation CRTC 2010-490 directive to set aside 7 CO Codes for initial code assignments for Carriers already providing service, and 10 for initial code assignments for new entrants)	May 2015
Subsequent to the January 2011 R-NRUF results shown above being made public some Carriers have revised their forecasts which has advanced the Projected Exhaust Date to May 2014	May 2014

Refer to Annex A, Figures 2, 3, 4, 5, 6, 7 and 8 for graphs of forecasted CO Codes and charts of Miscellaneous and LEC + WSP CO Codes in area codes 416/647.

5. RELIEF METHODS & OPTIONS

The basic NPA Relief Methods described in section 3 of this PD are the Geographic Split, the Overlay, and the Boundary Realignment. All such options were considered for potential relief of NPA 416/647; however, due to the unique situation in NPA 416/647 (i.e., single Exchange Area, 10-digit local dialling already in place), certain Relief Methods were considered to be inappropriate or impractical and therefore not given detailed assessment for the reasons noted below.

The Relief Methods that are not examined in detail in this PD are:

- Geographic Split - not examined in detail since NPA 416/647 consists of a single Exchange Area and the Guideline does not allow an Exchange Area to be divided to provide NPA relief.
- Concentrated Overlay - not examined in detail since NPA 416/647 consists of a single Exchange Area and the Guideline does not allow an Exchange Area to be divided to provide NPA relief.
- Boundary Realignment - not examined in detail since growth is also occurring in adjacent NPAs, and Boundary Realignment would only provide a short-term solution before subsequent relief would be required. In addition, Boundary Realignment would create customer confusion and additional complexity for Carrier routing.
- Technology-specific overlay - not examined in detail because assigning NPA Codes to specific types of technology such as wireline and wireless services has not been possible since wireless number portability came into effect.

Based on the above assessment of the basic methods, the following Relief Options were identified and examined in detail:

- Boundary Extension Overlay – 1 option (Option 1)
- Distributed Overlay – 1 option (Option 2)

See Annex A, Figures 7 and 8 for diagrams of the Relief Options identified in the PD.

5.1 Option 1 – NPA Code 365 Boundary Extension Overlay

Description:

This Relief Option would realign the boundaries of the geographic area served by NPA Code 365 to also include the area served by NPA Codes 416/647.

Currently NPA 416/647 is projected to exhaust in May 2014. NPA 289/905 is currently projected to exhaust in April 2015 and the CRTC has ordered that relief be implemented on 25 March 2013 in Telecom Decision CRTC 2010-213.

If both NPAs are overlaid by a single NPA Code (i.e., 365 Boundary Extension Overlay) on March 25, 2013 the subsequent relief in the combined NPA area would occur in October 2017.

Even though Commission staff has directed that the Relief Planning Committees must examine all options, the interval between the current NPA Relief Date and the subsequent NPA Relief Date is so short that this option is not viable.

5.2 Option 2 - Distributed Overlay of New NPA Code on NPA 416/647

Description:

This Relief Option would introduce a new NPA Code as a distributed overlay on the NPA 416/647 on March 25, 2013.

The number of separate relief planning areas in Ontario would remain at six.

After this distributed overlay is implemented in 2013, NPA Codes 416/647/new NPA would be expected to exhaust in 2021.

6. SUMMARY OF RELIEF OPTIONS

The following table summarizes the Relief Options, Projected Exhaust Dates, Relief Timing and Type, and Impacts:

Plan		Projected Exhaust Dates			Relief - Timing & Type		Quantity of CO Codes affected by No. changes	Local Dial # of digits
#	Description	NPA 416/647	New NPA	NPA 365	Relief Date	Type		
1	NPA Code 365 Boundary Extension Overlay	2014	2018	2023	2013 (416/647) 2017 (365) 2022 (289/905/365/416/647/new)	BO DO DO	Nil Nil Nil	10 10 10
2	Distributed Overlay of New NPA Code on NPA 416/647	2014	2021 2028		2013 (416/647) 2020 (416/647/new) 2027	DO DO DO	Nil Nil Nil	10 10 10

Key: 10 = mandatory 10-digit local dialling, BO= Boundary Extension Overlay, DO = Distributed Overlay
 ? = Unknown (Relief Type, Quantity of CO Codes affected by No. Changes, and Local Dial # of digits)

7. ASSESSMENT OF RELIEF OPTIONS

The RPC evaluated the Relief Options identified in sections 5 and 6 of this document. A Pro, Neutral or Con (P, N or C) rating was established for each Relief Option for each of the following attributes. The results will be listed in the table below the list of attributes.

- A. NPA Code Conservation – quantity of new NPA Codes required in NPA 289/905 and NPA 416/647 within the next 20 years after NPA relief is implemented (i.e., 2014-2034) (P = 2 or fewer new NPA Codes; N = 3 new NPA Codes; C = 4 or more new NPA Codes)
- B. Number of separate Relief Planning areas in Ontario in the long term (P = decrease; N = stays same; C = increase)
- C. Level of Carrier Costs – e.g., including implementation and customer awareness (P = Low; N = Medium; C = High)
- D. Time required to implement relief, i.e., time between the CRTC's Decision date and the date when CO Codes in the new/relief NPA Code can be activated (P = shortest; N = same; C = longest)
- E. Longevity – the length of time between this relief and subsequent relief activity in NPA 416/647 (e.g., a new area code) (P = 11 or more years; N = 6 through 10 years; C = within 5 years)
- F. Established Geographic Identities – changes in boundaries of existing NPAs (P = none; C = 1 or more existing NPAs affected)
- G. New Geographic Identities – boundaries of new NPA align with boundaries of known areas (e.g., existing NPA, provinces) or identifiable geographical features (e.g., rivers, islands) (P = aligns with existing NPA boundaries; N = aligns with geographical features but not with existing NPA boundaries; C = aligns with neither existing NPA boundaries, nor identifiable geographical features)
- H. Potential maximum quantity of NPA Codes in an Exchange Area in the next 20 years (P = 3 or fewer NPA Codes; N = 4 NPA Codes; C = 5 or more NPA Codes)
- I. Does the relief Code cover a single existing NPA? (P = Yes; C = No)

Relief Plan		Pro, Neutral or Con for Each Attribute										Rating		
#	Description	A	B	C	D	E	F	G	H	I				
1	NPA Code 365 Boundary Extension Overlay	N	P	N	C	C	P	P	C	C				-1
2	Distributed Overlay of New NPA Code on NPA 416/647	P	N	P	P	N	P	P	N	P				6

Note: None of the options require Exchange Area boundary changes.

If P, N and C are assigned a weighting of +1, 0 and -1, respectively, then analysis of the above table gives the highest rating of 6 points to Option 2, Option 2 is clearly superior when assessed using the above criteria.

In addition to the above assessment of attributes, the RPC developed the following assessment of the relative merits of the two options.

Assessment:

The RPC views the distributed overlay option as preferable to the boundary extension overlay option.

A distributed overlay of a new NPA Code on NPA 416/647 would cost less for some Carriers to implement and manage in the future than the Boundary Extension Overlay option. Costs for some Carriers would be minimized with a Distributed Overlay due to fewer changes being required for back-office support and billing systems.

The distributed overlay option would retain the existing boundaries of the NPA 416/647 area, thus maintaining the geographic identify of area codes 416/647 and the new NPA Code with the City of Toronto Exchange Area.

In addition, using the January 2011 R-NRUF results as modified in section 4, it would provide the longest time frame before another exhaust would occur (i.e., 7 years from 2014 to 2021 versus only 4 years from 2014 to 2018 for the Boundary Extension Overlay) and relief would be required again in this region. Long-term relief is provided as the new Projected Exhaust Date would be 2021 rather than 2018 under the Boundary Extension Overlay option.

Since 2000, NPA relief in eastern Canada (Ontario and Quebec) has been provided through distributed overlays. Consequently, the public and Carriers are most familiar with the distributed overlay Relief Method.

The advantage of the boundary extension overlay option is that the number of separate relief planning areas in Ontario would be reduced to five (5) compared to six (6) for the Distributed Overlay, thus reducing the quantity of geographic areas that would require future relief planning activity in the short-term.

A drawback of the boundary extension overlay is that the geographic area served by area code 365 will be different than the geographic areas served by 416/647 and 289/905 potential resulting in customer confusion and resistance to assignment of numbers from the new area code.

Accordingly, the RPC prefers and recommends that relief for the 416/647 region be provided using Option 2. - Distributed Overlay of a New NPA Code on NPA 416/647.

8. DIALLING IMPACTS FOR LOCAL CALLS

Currently 10-digit dialling is mandatory for local calls originating within area code 416/647, and for local calls to area code 289/905 from adjacent area codes. Local dialling plans will not change when NPA 416/647 relief is implemented.

NPA relief will not affect the dialling plan for long-distance calls originating in NPA 416/647 or any other NPA. No local calling will become long-distance and no long-distance calling will become local as a result of NPA relief.

9. CO CODES FOR INITIAL CODE ASSIGNMENTS AND CO CODES FOR INITIAL CODE ASSIGNMENTS FOR NEW ENTRANTS ONLY

When area code relief planning becomes necessary, the CRTC usually directs that quantities of CO Codes in an exhausting NPA Code be set aside prior to relief as unavailable for assignment in order to ensure that some CO Codes in the exhausting NPA Code will be available after relief via an overlay for initial code assignments for new entrants only and for initial code assignments for applicants in general or those already providing service in the NPA. In the absence of a Jeopardy Condition, exhaust of the NPA, or a split, the set-aside CO Codes would only be available after relief via an overlay, and any set-aside CO Codes remaining two years after the overlay would be returned to the general pool.

A New Entrant is an entity who, at the time of their first request for assignment of CO Code(s) in an NPA, does not provide any telecommunications services and does not hold any CO Codes within the boundaries of the NPA.

In Telecom Notice of Consultation CRTC 2010-490, the CRTC stated in item 7 that: *“In developing its recommendations, the 416/647 RPC is directed to set aside, at a minimum, 7 central office codes for initial code assignments for carriers already providing service in the area served by area codes 416 and 647, and 10 central office codes for initial code assignments exclusively for new entrants”*. Accordingly, the CNA has set aside 17 CO Codes, as directed.

If the CRTC-approved relief method is an overlay, then these quantities of set aside CO Codes would become available for assignment as specified above during the two-year time period after implementation of the overlay. Any set-aside CO Codes remaining unassigned at the end of the two-year time period would be returned to the general pool of assignable CO Codes.

10. PROPOSED SCHEDULE

The RPC submits the following schedule for NPA 416/647 relief based on the recommendations contained in this Planning Document and the current Projected Exhaust Date (PED) of October 2016. The RPC will monitor the PED, and if it changes significantly in the future (e.g., is advanced or delayed by greater than 6 months), the RPC will assess the situation and, if necessary, submit recommendations including a revised schedule to the CRTC for consideration and approval.

RELIEF IMPLEMENTATION SCHEDULE For a Distributed Overlay of a new NPA Code over NPAs 416/647

Item	Task or Event	PRIME	START	END
1	CNA identifies NPA exhaust and notifies by e-mail CRTC staff, CSCN, NANPA & CISC that the NPA will exhaust within the future six year time period	CNA		25-Mar-10
2	CNA conducts first R-NRUF (June 2010 R-NRUF)		15-Jun-10	15-Sep-10
3	CRTC issues Telecom Notice of Consultation regarding RPC Ad Hoc CISC and Interested Parties list	CRTC		20-Jul-10
4	CNA develops and distributes IPD to RPC		15-Sep-10	19-Oct-10
5	RPC participants review IPD & submit contributions to RPC	RPC	19-Oct-10	16-Apr-10
6	CNA chairs initial RPC meeting to start development of PD, RIP & PL, & schedules future meetings/conference calls including creation & consultation with CATF and NITF	CNA RPC	09-Nov-10	10-Nov-10
7	CNA chairs subsequent RPC meetings/conference calls to finalize PD & RIP	CNA RPC	10-Nov-10	09-May-11
8	Special Types of Telecommunications Service Users (9-1-1 PSAPs, alarm companies, ISPs, paging companies, etc.) to identify any concerns to RPC & CRTC	Special Users		09-May-11
9	CNA forwards Planning Document (PD) and, possibly, RIP to the CISC and CRTC for approval	CNA		16-May-11
10	CRTC issues Telecom Decision approving the Relief Method, Relief Date, New NPA & Relief Implementation Plan (RIP)	CRTC		15-Jul-11
11	Task Forces, TSPs and users implement relief (starts upon CRTC approval of RIP and ends on Relief Date)	TSPs	15-Jul-11	25-Mar-13
12	All Telecom Service Providers (TSPs) to develop and file individual consumer awareness programs with the CRTC (may be done collectively by Telecommunications Alliance) (starts upon CRTC approval of RIP and should be completed about 24 months prior to the Relief Date)	TSPs	15-Jul-11	24-Sep-11
13	CNA issues media release (in coordination with Telecommunications Alliance) (may start upon CRTC approval of RIP and should be issued at least 18 months prior to the Relief Date)	CNA		24-Sep-11
14	CNA submits PL and RIP to NANPA (should be submitted at least 18 months prior to the Relief Date)	CNA		24-Sep-11

Item	Task or Event	PRIME	START	END
15	NANPA receives and posts Planning Letter to NANPA website (within 2 weeks of receipt from the CNA)	NANPA	24-Sep-11	08-Oct-11
16	All TSPs implement consumer awareness activities (starts upon filing of Consumer Awareness Programs with the CRTC and is completed on the Relief Date)	TSPs	24-Sep-11	25-Mar-13
17	All TSPs to notify all customers (including residence, business & special customers) of the new overlay NPA (may start upon the filing of Consumer Awareness Programs with the CRTC and all customers should be notified by at least 18 months prior to the Relief Date)	TSPs	24-Sep-11	24-Sep-11
18	TSPs to submit Progress Report #1 to NITF and CATF (starts after completion date for all TSPs to notify their customers and requires 2 weeks)	TSPs	24-Sep-11	09-Oct-11
19	NITF and CATF develop & submit Progress Report #1 to RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	09-Oct-11	23-Oct-11
20	RPC submits Progress Report #1 to CISC/CRTC (linked to NITF and CATF reports)	RPC	23-Oct-11	06-Nov-11
21	Telcordia TRA database updates to add Exchanges to new overlay NPA (starts on the date that the PL is posted to the NANPA web site and must be completed by 6 months prior to the Relief Date)	Telcordia TRA	08-Oct-11	25-Sep-12
22	All Telecommunications Service Users (including Special Users 9-1-1 PSAPs, alarm companies, ISPs, paging companies, etc.) to implement changes to their telecom equipment & systems to accommodate the new NPA (starts upon CRTC approval of RIP and ends on the Relief Date)	Telecom Service Users	15-Jul-11	25-Mar-13
23	Payphone Providers Reprogram Payphones (starts upon CRTC approval of RIP and ends on the Relief Date)	Payphone Providers	15-Jul-11	25-Mar-13
24	TSPs and database owners/operators to modify systems and industry databases (starts upon CRTC approval of RIP and ends on the Relief Date)	TSPs & Database Owners	15-Jul-11	25-Mar-13
25	Operator Services & Directory Assistance Readiness (starts upon CRTC approval of RIP and ends on the Relief Date)	TSPs	15-Jul-11	25-Mar-13
26	Directory Publisher Readiness for overlays (ability to identify the NPA in telephone numbers in the directory published after the Overlay NPA is activated) (starts upon CRTC approval of RIP and ends on the Relief Date)	Directory Publishers	15-Jul-11	25-Mar-13
27	9-1-1 PSAP Systems and Databases Readiness (starts upon CRTC approval of RIP and ends on the Relief Date)	PSAPS & TSPs	15-Jul-11	25-Mar-13
28	9-1-1 TSP Readiness (starts upon CRTC approval of RIP and ends on the Relief Date)	TSPs	15-Jul-11	25-Mar-13
29	ISCP & Service Order Systems Readiness (starts upon CRTC approval of RIP and ends on the Relief Date)	TSPs	15-Jul-11	25-Mar-13
30	International Gateway Switch Translations Readiness for new NPA (starts upon CRTC approval of RIP and ends on the Relief Date)	Int'l TSPs	15-Jul-11	25-Mar-13

Item	Task or Event	PRIME	START	END
31	Canadian Local Number Portability Consortium (CLNPC) Database Readiness for new NPA (starts upon CRTC approval of RIP and ends on the Relief Date)	CLNPC & NPAC	15-Jul-11	25-Mar-13
32	Toll Free SMS Database Readiness for new NPA (starts upon CRTC approval of RIP and ends on the Relief Date)	Toll TSPs	15-Jul-11	25-Mar-13
33	TSPs apply for Test CO Codes in new NPA (applications may be submitted no more than 6 months and no less than 66 days prior to the start date for the Inter-Carrier Testing Period) (Section 7.16.4 Canadian RP GL)	TSPs	07-Jul-12	02-Nov-12
34	Develop Inter-Carrier Network Test Plans and prepare for testing (individual TSPs to make arrangements in accordance with interconnection agreements) (may start upon CRTC approval of RIP and must be completed by start date for the Inter-Carrier Testing Period)	NITF & TSPs	15-Jul-11	07-Jan-13
35	All international and domestic Telecommunications Service Providers (TSPs) must activate the new NPA in their networks by the start date for the Inter-Carrier Testing Period	TSPs		07-Jan-13
36	Activation date for Overlay NPA Test CO Codes and Test Numbers in network (should be completed by the start date for the Inter-Carrier Testing Period)	TSPs		07-Jan-13
37	Inter-Carrier Testing Period (subject to Inter-Carrier Network Test Plans) (starts about 3 months prior to the Relief Date, and ends about 1 month after the Relief Date)	NITF & TSPs	07-Jan-13	24-Apr-13
38	TSPs to submit Progress Report #2 to NITF and CATF (starts on commencement of Inter-Carrier Testing Period)	TSPs	09-Nov-12	23-Nov-12
39	NITF and CATF develop & submit Progress Report #2 to RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	23-Nov-12	07-Dec-12
40	RPC submits Progress Report #2 to CISC/CRTC (linked to NITF and CATF reports)	RPC	07-Dec-12	21-Dec-12
41	Relief Date (earliest date when CO Codes in new NPA may be activated)			25-Mar-13
42	TSPs submit Final Report to CATF and NITF (starts on Relief Date and provides 2 weeks for preparation & submission)	TSPs	25-Mar-13	08-Apr-13
43	NITF and CATF develop & submit Final Progress Report to RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	08-Apr-13	22-Apr-13
44	RPC submits Final Progress Report to CISC/CRTC (linked to NITF and CATF reports)	RPC	22-Apr-13	06-May-13
45	TSPs disconnect Test Codes & Numbers, and submit Part 1 form to return Test Codes (starts 1 month after Relief Date and allows 1 month for completion)	TSPs	24-Apr-13	24-May-13

11. JEOPARDY CONTINGENCY PLAN (JCP)

The Relief Planning Committee (RPC) has developed the following JCP for inclusion in the Planning Document (PD) for NPA 416/647. This JCP is based on the example contained in Appendix F to the Canadian NPA Relief Planning Guideline.

This JCP shall remain in effect until either the Jeopardy Condition is suspended or 66 days before the Relief Date. A CO Code Applicant needing to activate a CO Code in the minimum amount of time (i.e., 66 days) can obtain a CO Code from the post-relief inventory by applying 66 days prior to the Relief Date.

During a Jeopardy Condition, CO Code Applicants shall submit all CO Code applications and related correspondence for the Jeopardy NPA to CRTC staff in addition to the CNA.

During a Jeopardy Condition, the CNA shall only assign CO Codes from the exhausting NPA to a CO Code Applicant upon approval of CRTC staff.

The following measures shall be implemented by all CO Code Holders in NPA 416/647 when this JCP is approved by the CRTC and while a Jeopardy Condition is in effect.

- 1) Carriers and/or Telecommunications Service Providers (TSPs):
 - a) shall age disconnected residential and wireless telephone numbers for a maximum of two months;
 - b) shall age disconnected business telephone numbers for a maximum of six months. Under special circumstances, the six month aging limit for business telephone numbers may be extended to twelve months if required to accommodate local directory publishing dates for high volume call-in applications (e.g., heavily advertised local business numbers such as radio talk shows, food ordering services, ticket sales, chat lines), or for numbers associated with public service emergency applications or for numbers advertised in directories for which customers have requested reference of calls;
 - c) shall return all CO Codes that are not being used nor intended to be used to directly serve customers to the assignment pool within two months (e.g., plant test codes);
 - d) should work towards, and encourage existing customers, to either activate or return the reserved numbers in order to bring the reserved quantity down to a maximum of 10% of the quantity of numbers In-Service for that customer;
 - e) shall not allow the quantity of reserved numbers to be increased by new reservation requests by existing customers to more than 10% of the quantity of numbers in service for that customer. In the case of new customers, number reservations shall be limited to 10% of the total quantity of telephone numbers being placed into service for that customer;
 - f) shall, within 45 days from the date that the CNA declares a Jeopardy Condition submit a Part 1 Form for each remaining reserved CO Code either returning the reserved CO Code to the CNA or requesting assignment of the reserved CO Code. Once the 45-day period has elapsed, the CNA shall make available for general assignment all CO Codes that are still reserved and have not been applied for as assignments on a Part 1 Form received by the CNA. Within 60

- days from the date that the CNA declares a Jeopardy Condition, the CNA shall report to CRTC staff and the RPC as to how many of these codes have been assigned or made available for general assignment;
- g) shall not be permitted to obtain a new CO Code reservation;
 - h) shall place all CO Codes assigned prior to the Jeopardy Condition being declared In-Service within three months of the effective date for CO Code activation in the network, or within three months of the date that the Jeopardy Condition was declared. If the CO Code is an Initial Code and the CO Code Holder can demonstrate that, due to circumstances beyond its control, the In-Service date has been delayed beyond the applicable timeframe, and then the CNA may grant an extension of up to two months to the In-Service date. The CNA shall initiate reclamation procedures for all CO Codes that have not been placed In-Service within these timeframes unless CRTC staff approves a further extension.
- 2) For new applications for Initial Codes, each CO Code Holder shall certify that the CO Code will be activated in the network and placed In-Service within four months of the date of application for the Code. If the CNA does not receive a Part 4 Form within this timeframe, confirming that the CO Code has been placed In-Service, the CNA will initiate reclamation measures. If the CO Code Holder can demonstrate that, due to circumstances beyond its control, that the In-Service date has been delayed not more than six months from the original application date, then the CNA may grant an extension to the In-Service date, so long as the In-Service date is not more than six months beyond the original application date. If the In-Service date has been delayed more than six months from the original application date, then the CNA shall reclaim the Code unless CRTC staff approves a further extension.
- 3) When applying for an Additional Code for Growth, a CO Code Holder who is submitting a Part 1 Form and Appendix B worksheet shall also submit a completed Supplementary Form for a Growth CO Code Application (attached) which certifies and/or provides the following information for the specific switching entity/POI and Exchange Area when the Growth CO Code is being requested in a Jeopardy Condition:
- a) certification that all held telephone numbers have been released;
 - b) certification that reserved numbers do not exceed ten percent of the total quantity of numbers as defined in Appendix G of the Canadian CO Code (NXX) Assignment Guideline;
 - c) certification that each reseller/dealer had been advised of the Jeopardy Condition and the requirement that they would only be allocated additional numbers during the Jeopardy Condition on the provision to the CO Code Holder of written confirmation that their number inventory has been reduced to an amount less than two times the highest quantity of customer numbers assigned in any month during the previous 12 months. Additional numbering resources will only be provided by the CO Code Holder to the reseller/dealer to the extent that the reseller's/dealer's inventory can only increase up to a maximum of three months' inventory;
 - d) confirmation that the Part 1 form submitted with the application has the Jeopardy Condition box in section 1.6 checked to certify that the existing CO Codes are projected to exhaust within 4 months of the date of application or within the

-
- period specified within an approved JCP, and that the months-to-exhaust is documented on an Appendix B submitted to the CNA;
- e) a completed Telephone Number Utilization Report;
 - f) confirmation that the requested Growth CO Code was forecasted in the most recent NRUF or an explanation as to why it was not is attached; and
 - g) confirmation that the requested Growth CO Code will be placed In-Service within four months of the date of assignment.
- 4) Any CO Codes for growth assigned after the implementation of this JCP must be activated in the network and placed In-Service within four months of assignment. In the event that a CO Code Holder is unable to place the CO Code In-Service within four months of the date of assignment, the CO Code Holder must submit a written request for extension to the CNA. Such written requests must include documentation explaining the reason(s) for the missed date and proposing the new In-Service date. If the explanation includes reasons beyond the control of the CO Code Holder, the CNA may extend the In-Service date a maximum of one month. If the CO Code Holder does not place the CO Code In-Service within the one-month extension, the CNA shall reclaim the CO Code immediately at the end of the one-month extension unless CRTC staff approves a further extension.
- 5) A Carrier that has multiple switching entities within an Exchange Area shall examine the possibility of, and implement where feasible, number sharing between those switches as a potential method to delay requirements for additional CO Codes.
- 6) The CNA will compare the initial J-NRUF input to the recent NRUF inputs, in order to assess forecasting trends. The CNA shall monitor all inputs and shall test them for reasonableness in consultation with the Carrier. If the CNA is dissatisfied with the reasonableness, or the rationale provided for the deviations, then the matter will be referred to the Commission.
- 7) The CNA will request subsequent J-NRUF input from all current and prospective CO Code Holders quarterly until 3 months before relief is provided. If one or more R-NRUFs have already been conducted, and depending on the severity of the Jeopardy Condition, the CNA may defer a J-NRUF by up to two months if such a deferral brings the timing of that J-NRUF and subsequent J-NRUFs into alignment with other NRUFs that are conducted at 12, 6 or 3 month intervals. Subsequent J-NRUF input will be compared with the initial J-NRUF input to evaluate the effectiveness of the JCP. The CNA shall monitor all J-NRUF inputs and shall test them for reasonableness in consultation with the Telecommunications Service Providers. If the CNA is dissatisfied with the reasonableness, or the rationale provided for the changed forecasts, then the matter will be referred to the Commission.
- 8) A CO Code Applicant must have submitted a completed J-NRUF to the CNA before the CNA may assign a CO Code to that CO Code Applicant.
- 9) When a CO Code Applicant requests more CO Codes than it identified in its most recent J-NRUF forecast, the CNA will discuss the matter with the CO Code Applicant and if the CO Code Applicant wishes to proceed with the request, the CNA will forward the request to CRTC staff for consideration.
-

- 10) The CO Codes identified in the NPA CO Code Inventory Chart as “Assignable CO Codes in a Jeopardy Condition” will be assigned in the order determined by the RPC after all CO Codes which are “Available for Assignment as of dd/mm/yyyy” have been assigned.
- 11) After each J-NRUF, the CNA shall provide the Commission and the RPC participants with a report providing an updated NPA CO Code Inventory Chart for the NPA in jeopardy as well as the aggregate results of the most recent J-NRUF.
- 12) Exceptional issues or concerns may be referred by the CNA, or by individual entities (with a courtesy copy to the CNA), to the Commission for resolution.
- 13) In a situation where the Relief Date is on or after the PED, the quantity of CO Codes that may be assigned to a CO Code Applicant prior to the end of the Jeopardy Condition (i.e., 66 days prior to the Relief Date) shall be limited to the quantity forecasted by the CO Code Applicant in its most recent NRUF forecast submitted prior to the Jeopardy Condition being declared by the CNA (if no previous NRUF was submitted, then the previous forecast will be deemed to be zero codes). When making requests to obtain CO Codes prior to the end of the Jeopardy Condition (i.e., 66 days prior to the Relief Date), the CO Code Applicant may change the Exchange Area or the month when the CO Code assignment is required, provided a new J-NRUF and explanation accompanies the application. The control imposed by this option may be relaxed if subsequent J-NRUFs defer the PED to after the Relief Date. CO Codes that become available for assignment due to future reduced demand from other current and prospective CO Code Holders may be assigned at the discretion of CRTC staff.
- 14) If the CNA determines that the implementation of the JCP has not extended the Projected Exhaust Date of the NPA beyond the Relief Date, the CNA will consult with Commission staff and further CO Code conservation and assignment procedures may be ordered by the Commission (e.g., rationing, lottery, etc.).
- 15) In Telecom Notice of Consultation CRTC 2010-490 the CRTC directed the 416/647 RPC to set aside, at a minimum, 7 CO Codes for initial code assignments for carriers already providing service in the area served by area codes 416 and 647, and 10 CO Codes for initial code assignments exclusively for new entrants. A New Entrant is an entity who, at the time of their first request for assignment of CO Code(s) in an NPA, does not provide any telecommunications services and does not hold any CO Codes within the boundaries of the NPA.

When a Jeopardy Condition is in effect, the 7 CO Codes for initial code assignments for carriers already providing service in the area served by area codes 416 and 647 shall be made available for initial Code assignment prior to relief. Any CO Codes from this previously set-aside pool that remain when the Jeopardy Condition ends shall be returned to the pool for initial Code assignments for applicants in general for assignment following relief.

When a Jeopardy Condition is in effect, the 10 CO Codes for initial code assignments exclusively for new entrants shall be made available for initial Code assignment for new entrants prior to the relief if all other available CO Codes in the exhausting NPA have been assigned. Any CO Codes from this previously set-aside pool that remain when the

Jeopardy Condition ends shall be returned to the pool for initial code assignments for New Entrants for assignment following relief.

When a Jeopardy Condition is in effect, the 7 CO Codes for initial code assignments for carriers already providing service in the area served by area codes 416 and 647 shall be made available for initial Code assignment prior to relief. Any CO Codes from this previously set-aside pool that remain when the Jeopardy Condition ends shall be returned to the pool for initial Code assignments for applicants in general for assignment following relief.

If a Jeopardy Condition is in effect and, if all other available CO Codes in the exhausting NPA have been assigned, CRTC staff may make some or all of the CO Codes in the two set aside pools above, available for assignment to any entity for any purpose.

Supplementary form for a Growth CO Code Application - Page 2 of 2 - Telephone Number Utilization Report

(Note: if the spreadsheet below does not show on your display, please change the Word view to "Print Layout" or "Reading Layout")

NPA	NXX	Portable (Y or N)	Quantities of Telephone Numbers						% Utilization	
			Reseller Inventory	Assigned	R&H	Admin	Ported Out	Available		Aging
TOTAL										

% Utilization = (Reseller Inventory+Assigned+R&H+Admin+Ported Out+Aging)/(100)

Remarks: _____

NPA 416/647 CO Code Inventory Chart

The following chart and the instructions it contains will apply in NPA 416/647 in a Jeopardy Condition.

The chart shown below lists quantities of CO Codes unassignable prior to a Jeopardy Condition, CO Codes that become assignable in a Jeopardy Condition, and CO Codes in NPA 416/647 assigned and In-Service as of 16 May 2011. For an Overlay option it identifies 71 CO Codes that are unassignable prior to a Jeopardy Condition, 37 of which become assignable in a Jeopardy Condition. The CO Codes that become assignable in a Jeopardy Condition shall only be made available for assignment when all other available CO Codes have been assigned. The types of CO Codes that become assignable in a Jeopardy Condition should be made available in the same order as listed in the chart.

		Quantity
A	Total CO Codes in NPAs 416/647 (NXX format)	1600
B	CO Codes unassignable prior to a Jeopardy Condition	
	N11 Service Codes (211, 311, 411, 511, 611, 711, 811, 911)	16
	Special Use Codes (555, 950 & 976)	5
	Protected Code(s)	0
	Home NPA Code(s) (416, 647)	4
	Current Neighbouring NPA Codes (905)	2
	Future Canadian Geographic NPA Codes (257, 387, 437, 474, 584, 639, 672, 851, 942 in each NPA - see Note 1)	18
	Plant Test Codes (958 & 959)	4
	Special 7-digit Dialling Codes (310, 610 & 810)	5
	CO Codes set aside for Initial Codes for New Entrants only (for assignment after relief via an overlay [or before if a split])	10
	CO Codes set aside for Initial Codes for carriers already providing service (for assignment after relief via an overlay, [or before if a split])	7
	Total B	71
C	CO Codes assignable prior to a Jeopardy Condition (C=A-B)	1529
D	CO Codes unassignable prior to a Jeopardy Condition that become assignable in a Jeopardy Condition:	
	Future Canadian Geographic NPA Codes (257, 474, 584, 639, 672, 851 and 942 - see Note 2)	14
	Current Neighbouring NPA Codes (2 905 see Note 3)	2
	CO Codes set aside for Initial Code assignments after relief via an overlay (available subject to CRTC staff approval)	17
	Total D	33
E	Assignable CO Codes in a Jeopardy Condition (E=C+D)	1562
F	Assigned CO Codes as of 16 May 2011	1188
G	Net CO Codes available for assignment as of 16 May 2011 without a Jeopardy Condition (G=C-F)	374
H	Net CO Codes available for assignment as of 16 May 2011 in a Jeopardy Condition (H=E-F)	407

Notes:

1. 20 of the 29 CO Codes corresponding to Future Canadian Geographic NPA Codes are already assigned, In-Service, or available for assignment in NPA 416/647 leaving 18 CO Codes as currently unavailable for assignment.
2. There are 18 CO Codes (257, 387, 437, 474, 584, 639, 672, 851, and 942 in each NPA) corresponding to Future Canadian Geographic NPA Codes that currently are unavailable for assignment in NPA 416/647. CO Codes, 437 and 387 should remain unavailable for assignment in NPA 416/647 since NPA Codes 437 is recommended for this relief and 387 is recommended for the subsequent relief of NPA 416/647. Therefore the 14 CO Codes 257, 474, 584, 639, 672, 851 and 942 may be made available for assignment in NPA 416/647 (i.e. 7 Codes in two existing NPAs = a total of 14 CO Codes) if required during a Jeopardy Condition, subject to CRTC staff approval.
3. In an extreme Jeopardy Condition (i.e., when the Projected Exhaust Date is earlier than the Relief Date), 2 of the CO Codes corresponding to current Neighbouring NPA Codes (905) may be made assignable with CRTC staff approval.

12. SELECTION OF RELIEF NPA CODE

When an immediate or subsequent NPA relief requires a new NPA Code, some of the criteria for selecting the new NPA Code from the list of available Future Canadian Geographic NPA Codes are described in section 4.9 of the Canadian NPA Relief Planning Guideline as follows.

- a) The preferred Future Canadian Geographic NPA Code should not be an NPA Code that is assigned as a CO Code in the area that is being relieved (Home NPA(s)).
- b) The preferred Future Canadian Geographic NPA Code should not be an NPA Code that is assigned as a CO Code in another NPA within the same province where there is a possibility that a single new NPA Code could be overlaid on more than one NPA within the province, or where a boundary realignment could occur that affects another NPA.
- c) The preferred Future Canadian Geographic NPA Code should not be an NPA Code that is assigned as a CO Code in an Exchange Area in a neighbouring NPA, if the neighbouring NPA has 7-digit local calling within the NPA, and i) the Exchange Area in the neighbouring NPA where the CO Code is assigned has local calling to the NPA being relieved, or ii) the Exchange Area in the neighbouring NPA where the CO Code is assigned does not have local calling to the NPA being relieved, but other Exchange Areas within that neighbouring NPA have 7-digit local calling to the Exchange Area where the CO Code is assigned as well as local calling to the new NPA.

The NPA Code Selection Tool located on the CNA web site at http://www.cnac.ca/npa_codes/relief/overview.htm can assist in selecting a relief NPA Code from the pool of NPA Codes reserved for relief of geographic Canadian NPAs. The following table, extracted from the NPA Code Selection Tool, shows all codes corresponding to Future Canadian Geographic NPA Codes that are designated as unassignable CO Codes in Home or Home and Neighbouring NPAs, therefore are preferred candidates when selecting a relief NPA Code for NPA 416/647.

NXX corresponding to Future NPA →	257	387	437	474	584	639	672	851	942
NPA Code 365 Boundary Extension Overlay			✓						✓
Distributed Overlay of New NPA Code on NPA 416/647	✓	✓	✓✓	✓	✓	✓	✓	✓	✓✓

- ✓ indicates that corresponding CO Code is designated as unassignable in Home NPA(s)
- ✓✓ indicates that corresponding CO Code is designated as unassignable in Home NPA(s) and all adjacent NPAs

Based on the above table, Future NPA Codes 437 and 942 meet all the criteria for relief of NPA 416/647.

In CSCN TIF Report 87 dated 10 April 2010 re: Reservation of Future Canadian Geographic NPA Codes for relief of existing Canadian NPAs forecast to exhaust in the next 25 year timeframe, the CSCN submitted recommendations to the Commission for reserving NPA Codes for future relief of existing Canadian NPAs.

On 22 October 2010, the CRTC issued Telecom Decision CRTC 2010-784 *CRTC Interconnection Steering Committee consensus item – Reservation of area codes for future area code relief*. In this Decision, the CRTC directed the CNA to "set aside" the area codes proposed by the CSCN for future relief of existing in-service area codes that are forecast to exhaust during the next 20 years. The CRTC noted in the Decision that if these area codes are required for other purposes before they are used as the CSCN has proposed, the CNA may request that the Commission approve their use for alternative assignments. See <http://www.crtc.gc.ca/eng/archive/2010/2010-784.htm> .

The CRTC included the following table in the Decision:

Existing NPA	Description of NPA	Proposed area code reservation
226/519	Southern Ontario	548
289/365/905	Toronto fringe, southern Ontario	742
306	Province of Saskatchewan	474
416/647	Toronto, Ontario	437
506	Province of New Brunswick	428
709	Province of Newfoundland and Labrador	879
902	Provinces of Nova Scotia and Prince Edward Island	942

In the latest G-NRUF Report dated January 2010, the CNA forecasts that NPA 416/647 will exhaust twice in the next 20 years (i.e., in 2015 and 2024) rather than once (i.e., in 2021) as indicated in the previous January 2009 G-NRUF Report. In that Report, the NPA 902 Projected Exhaust Date is forecast to be in February 2018 (which occurs before the subsequent exhaust of NPA 416/647 in 2024) for which NPA Code 942 was recommended by the CSCN for future relief of NPA 902 as it met all of the required criteria.

Given the above considerations, the NPA 416/647 RPC recommends that NPA Code 437 be the new Relief NPA Code for the 416/647 region.

In addition, the RPC also recommends that NPA Code 387 should be reserved for subsequent relief in the 416/437/647 region as it is forecast to exhaust again in the next 10 years (i.e., 2021).

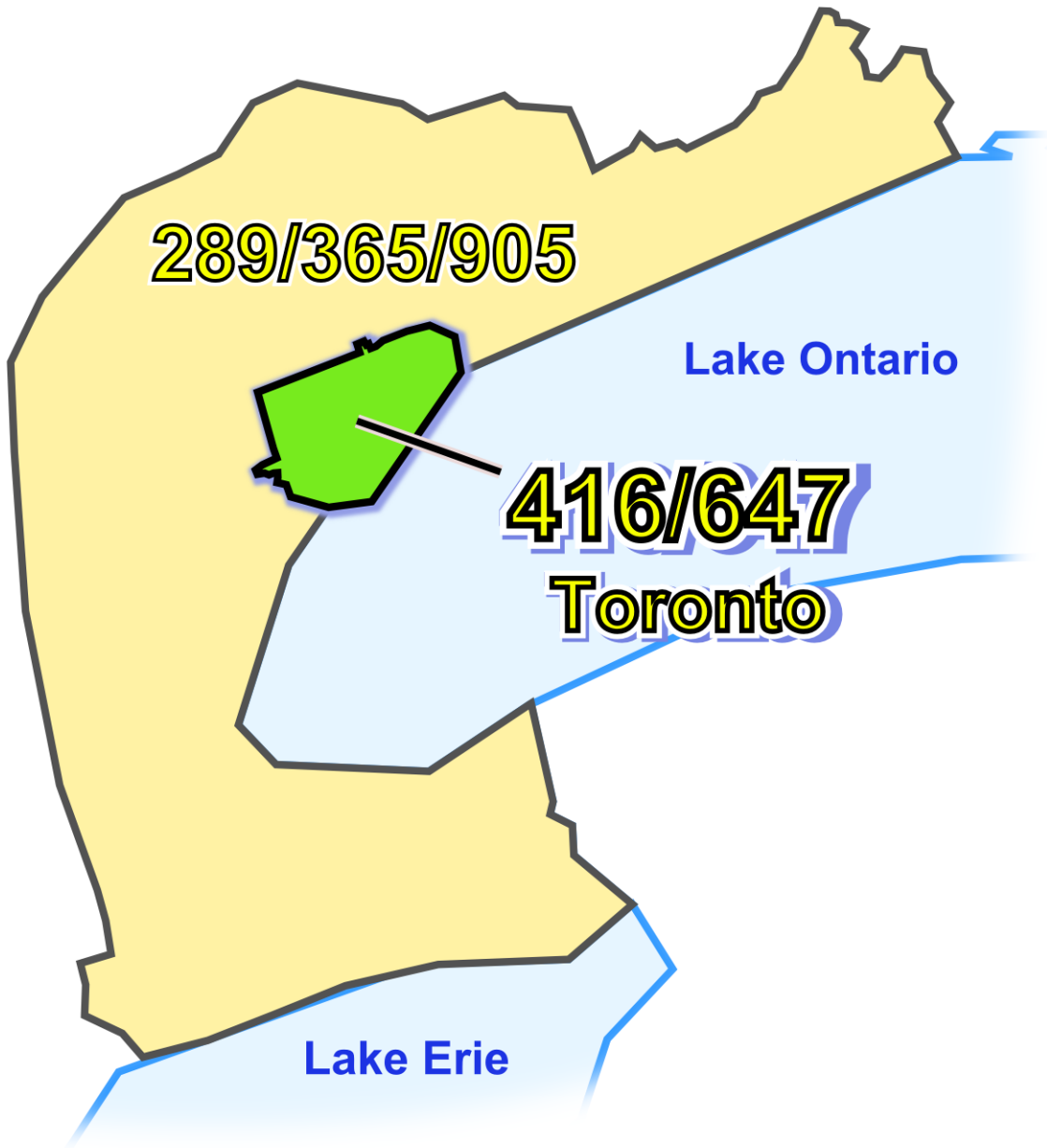
13. RECOMMENDATIONS

Based on the assessment of Relief Options and other issues contained in this document, the RPC submits the following recommendations to the CISC and CRTC:

- 1) The Relief Method should be a distributed overlay of a new NPA Code on NPA 416/647 (Option 2);
- 2) NPA Code 437 should be used for the Relief NPA Code for NPA 416/647;
- 3) The Relief Date should be 25 March 2013, to coincide with the CRTC-approved NPA 289/905 Relief Implementation Date;
- 4) NPA Code 387 should be reserved for subsequent relief in the 416/437/647 region.

**NPA 416/647
PLANNING DOCUMENT
ANNEXES**

Annexes
Planning Document NPA 416/647 Numbering Relief



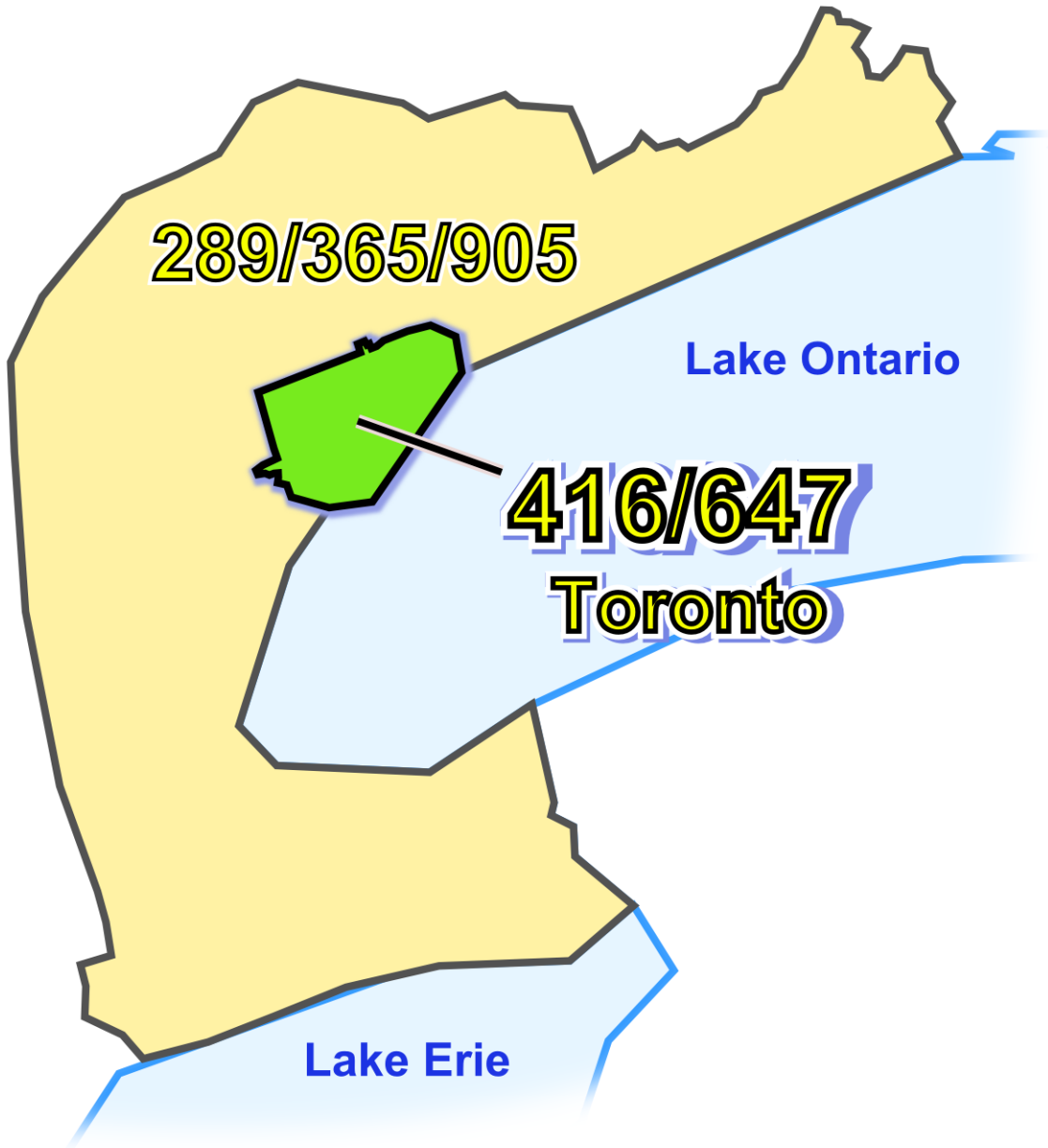


Figure 1 - Overview of NPA 461/647 and Adjacent NPAs

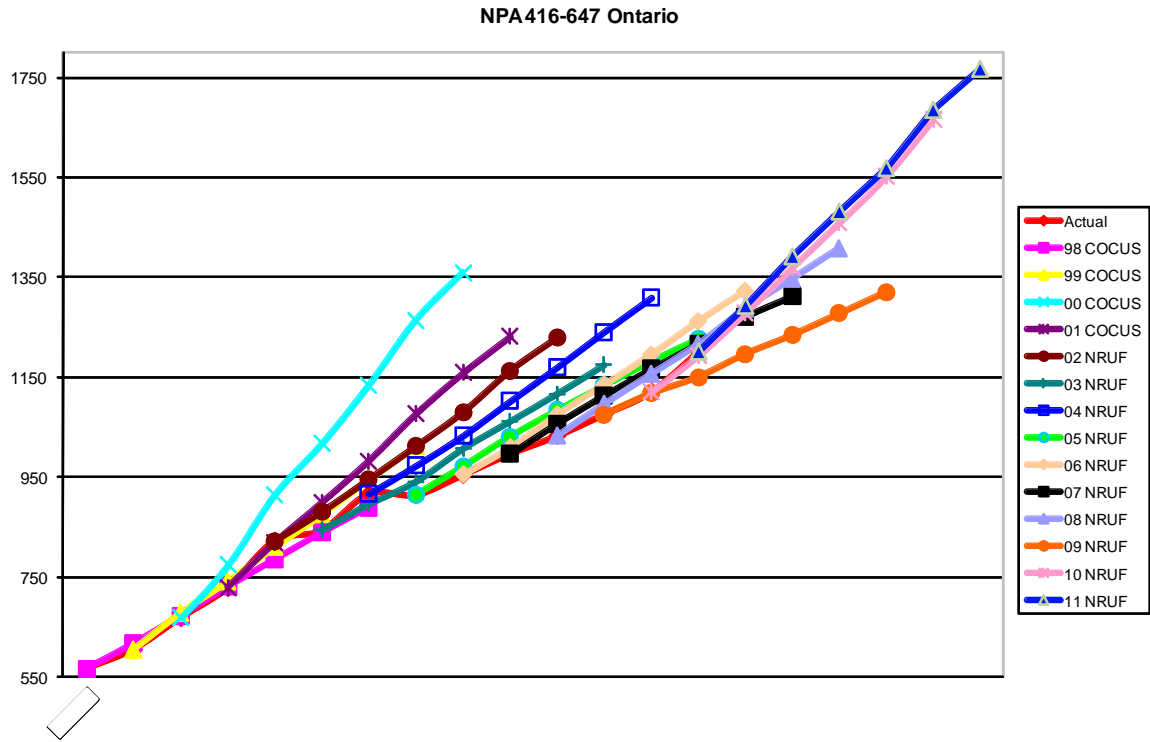


Figure 2 - NPA 416/647 Actual and Forecast CO Code Assignments

NPA 416/647 CO Code Exhaust January 2010 G-NRUF

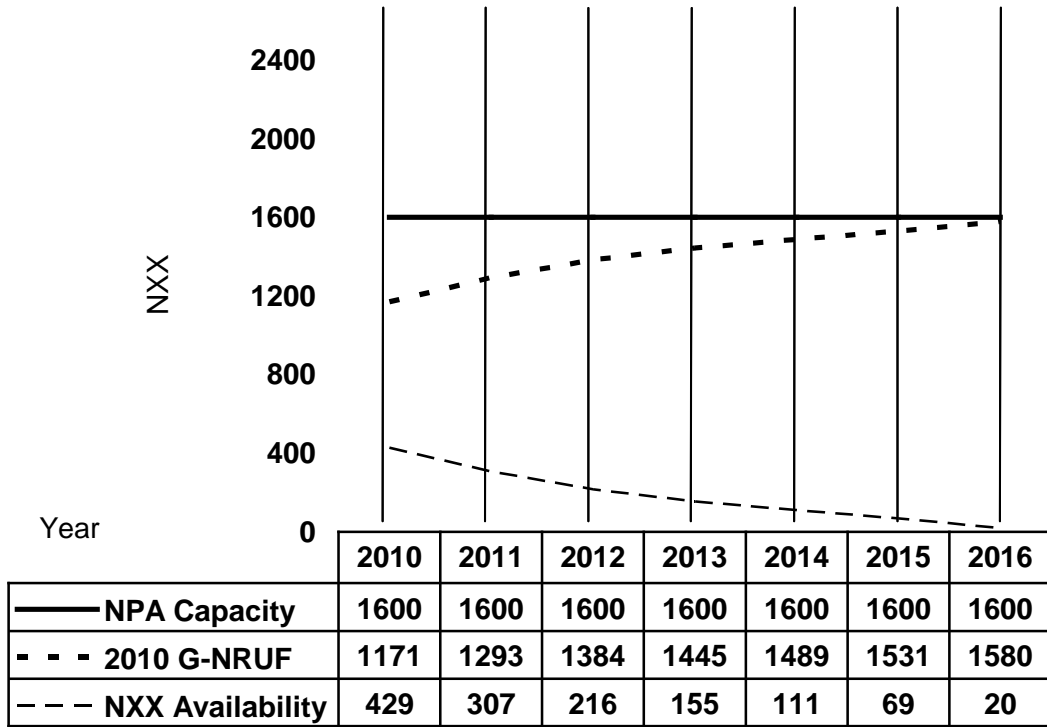


Figure 3 - NPA 416/647 CO Code Exhaust January 2010 G-NRUF

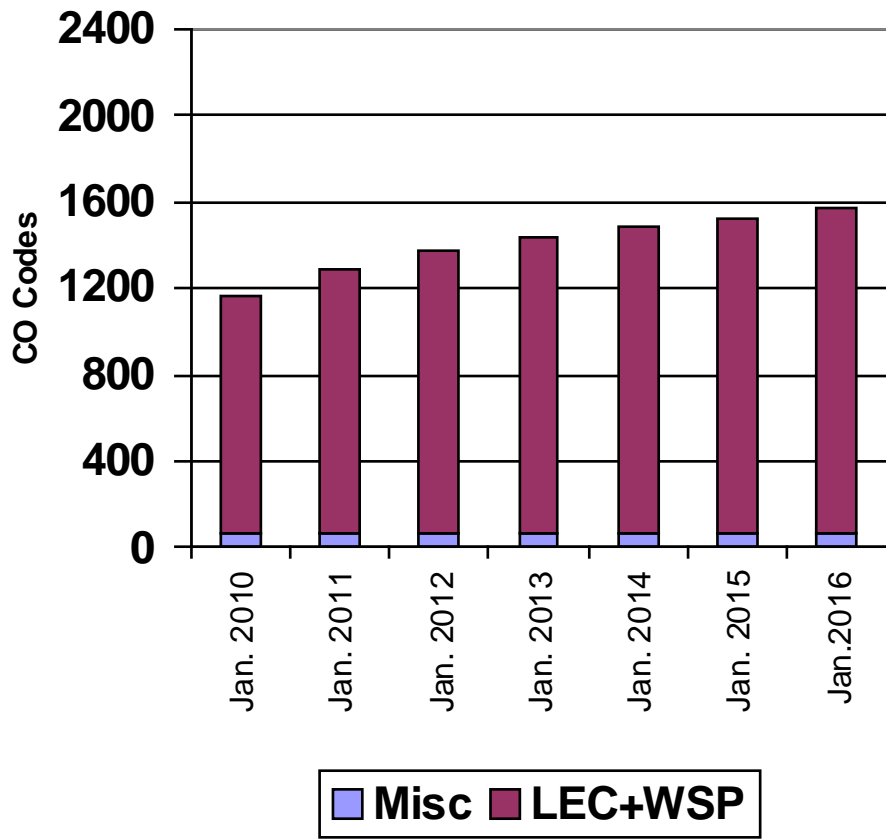
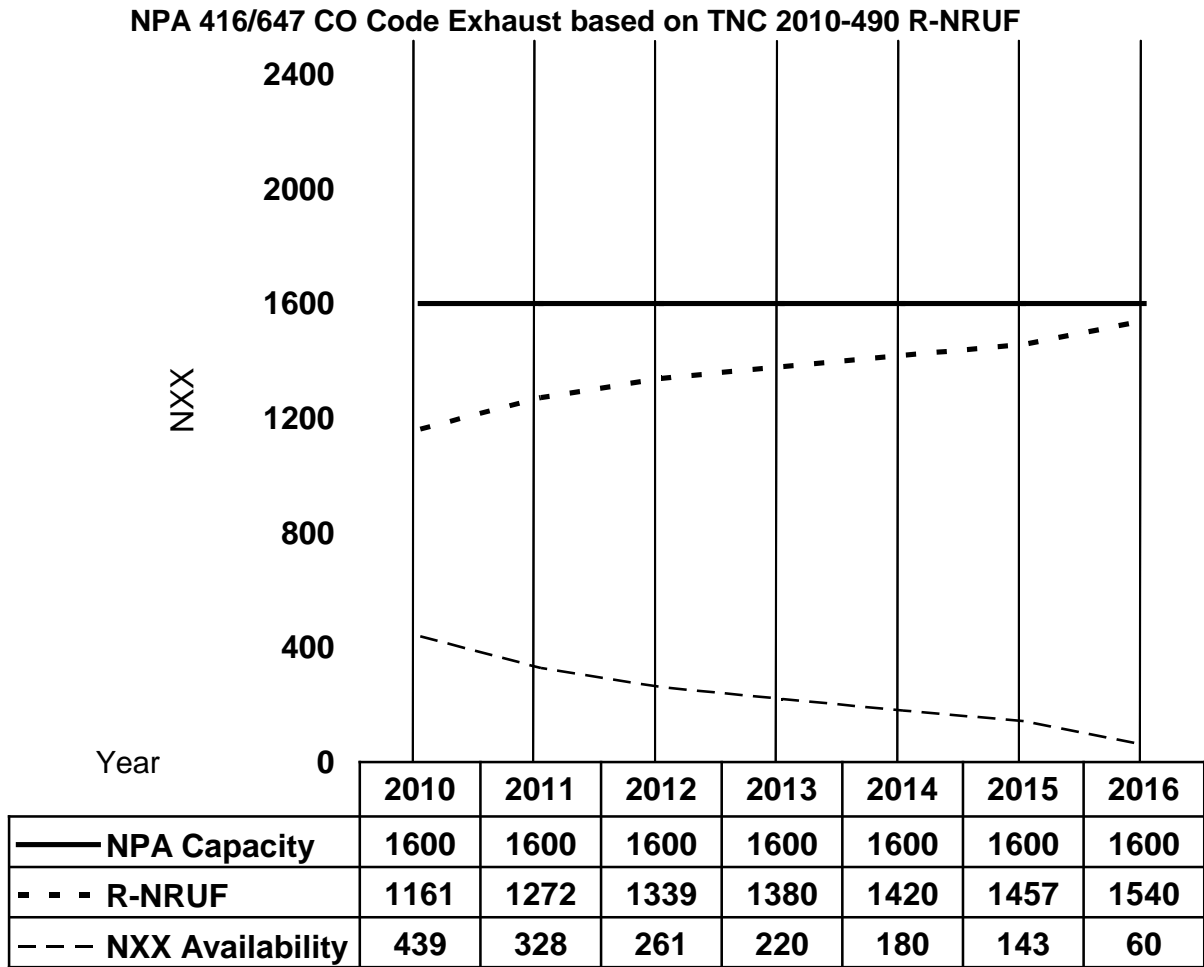


Figure 4 - NPA 416/647 Miscellaneous and LEC+WSP CO Codes 2010 G-NRUF



**Figure 5 - NPA 416/647 CO Code Exhaust after release of Telecom Notice of Consultation
CRTC 2010-490**

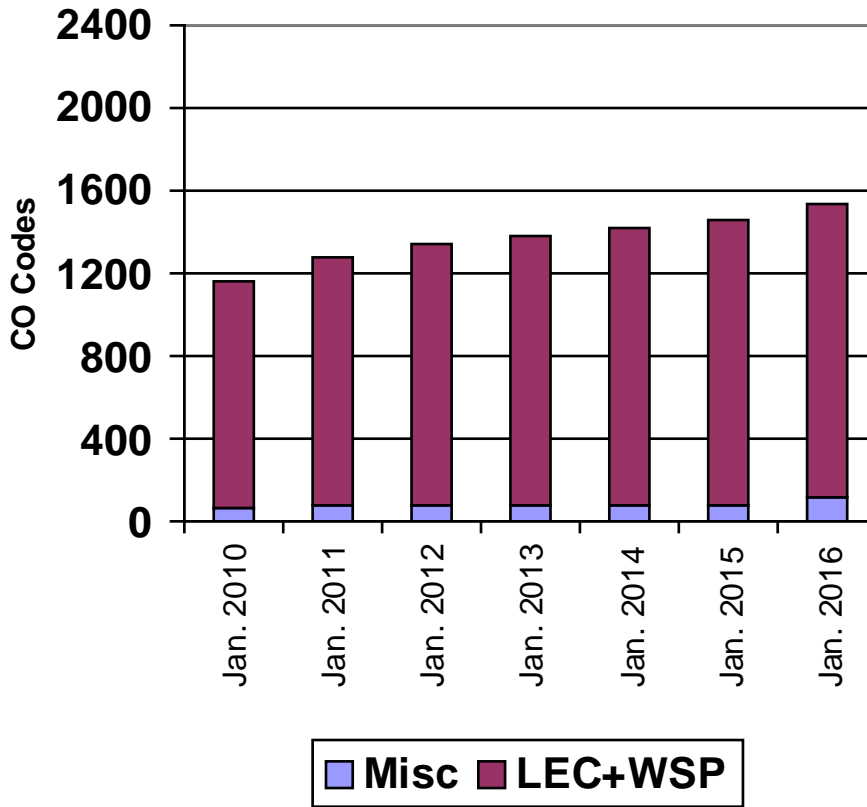


Figure 6 - NPA 416/647 Miscellaneous and LEC+WSP CO Codes after release of Telecom Notice of Consultation CRTC 2010-490

**NPA 416/647 CO Code Exhaust based on TNC 2010-490
January 2011 R-NRUF**

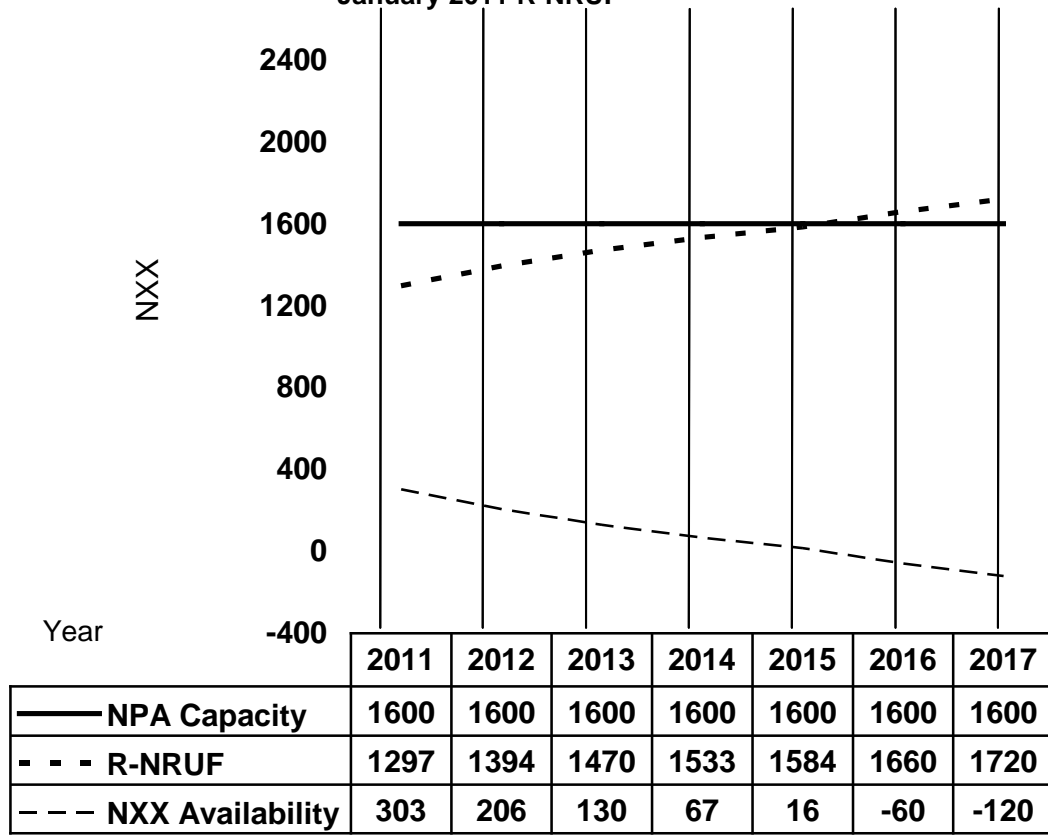


Figure 7 - NPA 416/647 CO Code Exhaust January 2011 R-NRUF

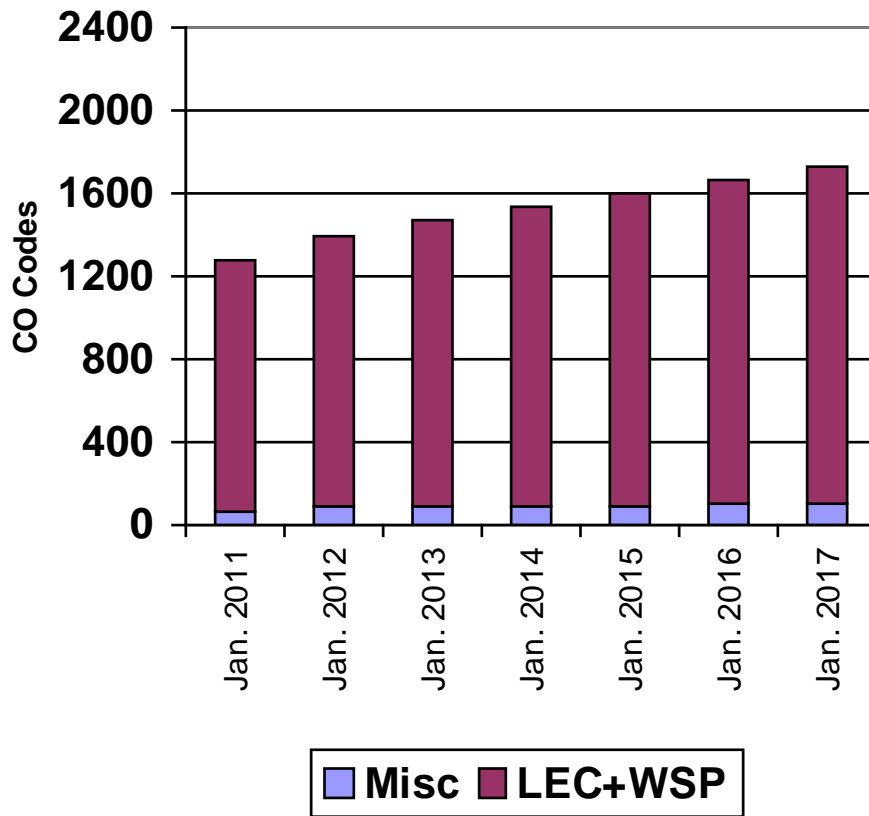


Figure 8 - NPA 416/647 Miscellaneous and LEC+WSP CO Codes January 2011 R-NRUF

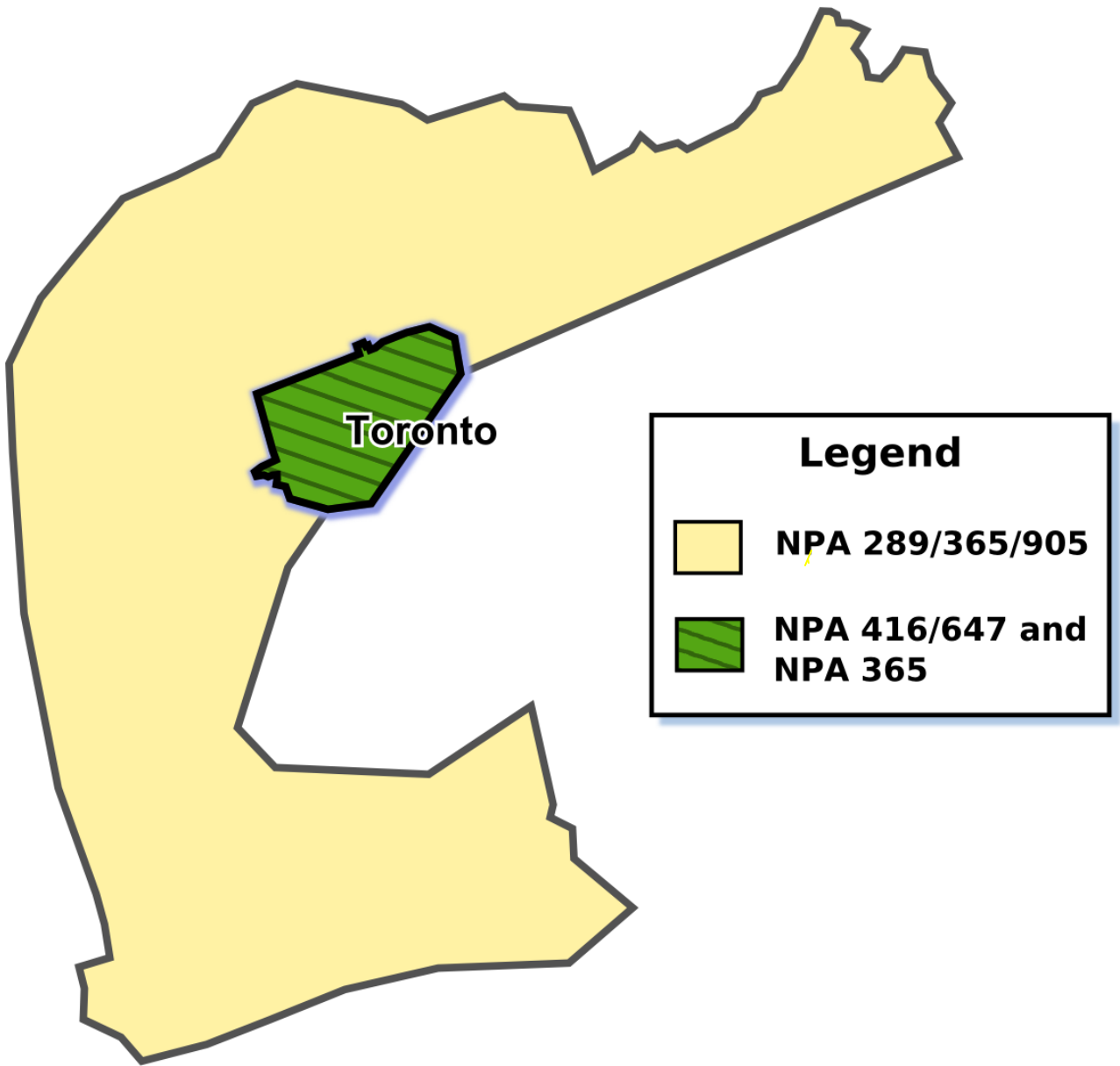


Figure 9 - Option 1: NPA Code 365 Boundary Extension Overlay

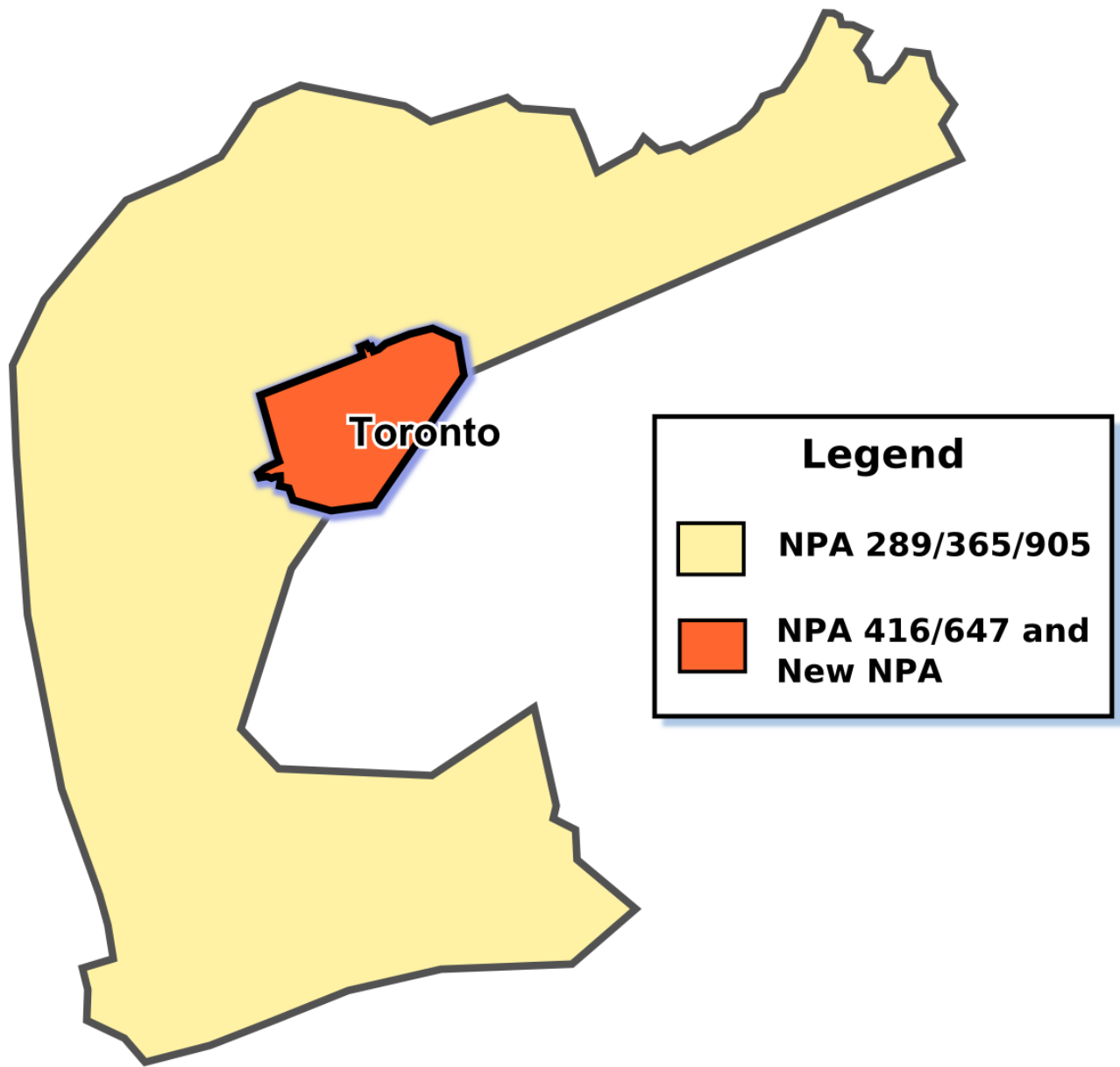


Figure 10 - Option 2: Distributed Overlay of New NPA Code on NPA 416/647

Table 1 – Exchange Areas currently in NPA 416/647 and NPA Code 365 for these Exchange Areas after each Relief Plan

In Option 1, boundaries of neighbouring NPA 365 would be extended to include Toronto Exchange currently served by NPA 416/647.

Exchange Areas (currently in NPAs 416/647 and 289/905/365)	Plan 1		Plan 2	
	289/905/365	365	416/647	New NPA
Toronto		✓	✓	✓
Ajax-Pickering	✓			
Ancaster	✓			
Aurora	✓			
Beamsville	✓			
Beeton	✓			
Bethesda	✓			
Binbrook	✓			
Blackstock	✓			
Bolton	✓			
Bowmanville	✓			
Bradford	✓			
Brampton	✓			
Brooklin	✓			
Burlington	✓			
Caledon East	✓			
Caledonia	✓			
Campbellville	✓			
Castlemore	✓			
Castleton	✓			
Cayuga	✓			
Claremont	✓			
Clarkson	✓			
Cobourg	✓			
Colborne	✓			
Cold Springs	✓			
Cooksville	✓			
Dundas	✓			
Dunnville	✓			
Fisherville	✓			
Fort Erie	✓			
Freelton	✓			
Garden Hill	✓			
Georgetown	✓			
Gormley	✓			
Grafton	✓			
Grimsby	✓			
Hagersville	✓			
Hamilton	✓			
Hampton	✓			

Exchange Areas (currently in NPAs 416/647 and 289/905/365)	Plan 1		Plan 2	
	289/905/ 365	365	416/ 647	New NPA
Keswick	✓			
King City	✓			
Kleinburg	✓			
Malton	✓			
Maple	✓			
Markham	✓			
Milton	✓			
Mount Albert	✓			
Mount Hope	✓			
Newcastle	✓			
Newmarket	✓			
Newtonville	✓			
Niagara Falls	✓			
Niagara-on-the-Lake	✓			
Nobleton	✓			
Oak Ridges	✓			
Oakville	✓			
Orono	✓			
Oshawa	✓			
Palgrave	✓			
Pelham	✓			
Port Colborne	✓			
Port Credit	✓			
Port Hope	✓			
Port Perry	✓			
Port Robinson	✓			
Queensville	✓			
Richmond Hill	✓			
Ridgeway	✓			
Roseneath	✓			
Schomberg	✓			
Selkirk	✓			
Snelgrove	✓			
South Pickering	✓			
St. Catharines-Thorold	✓			
Stevensville	✓			
Stoney Creek	✓			
Stouffville	✓			
Streetsville	✓			
Sutton	✓			
Thornhill	✓			
Tottenham	✓			
Unionville	✓			
Uxbridge	✓			
Victoria	✓			
Vineland	✓			
Wainfleet	✓			
Waterdown	✓			

Exchange Areas (currently in NPA 416/647 and 289/905/365)	Plan 1		Plan 2	
	289/905/365	365	416/647	New NPA
Welcome	✓			
Welland	✓			
Wellandport	✓			
West Lincoln	✓			
Whitby	✓			
Winona	✓			
Woodbridge	✓			

Distribution List

Exatel Inc.
222 McIntyre Street West Suite 505
North Bay, ON
Canada
P1B 2Y8
regulatory@vianet.ca

Regulatory E-Mail
Distributel Communications Limited
177 Nepean Street
Ottawa, ON
Canada
K2P 0B4
regulatory@distributel.ca

Edward Antecol
Vice President, Regularoty Affairs
Yak Communcations (Canada) Corp
48 Yonge St Suite 1200
Toronto, ON
Canada
M5E 1G6
Telephone: 416-949-1277
Fax: 416-640-1089
edwardantecol@globalive.com

Madalina Armeanca
Marketing Manager
Globalive Wireless management Corp
207 Queen's Quay W, Suite 710
Toronto, ON
M5J 1A7
Telephone: 416-572-0141
Fax: 416-987-1203
mlarmeanca@windmobile.ca

Larry Baines
Wireless Portability & Number Administration
Rogers Wireless
8200 Dixie Road
Brampton, ON
Canada
L6T 0C1
Telephone: 647-747-4649
Fax: 647-747-4557
larry.baines@rci.rogers.com

Bill Barsley
Manager - Planning & Engineering
TELUS
300 Consilium Place
Scarborough, ON
Canada
M1H 3G2
Telephone: 416-279-7989
Fax: 416-279-3930
bill.barsley@telus.com

Marc Berruyer
Network Planner
Videotron General Partnership
2155 Boul. Pie IX, 3e etage, bloc A
Montreal, QC
Canada
H1V 2E4
Telephone: 514-380-4255
Fax: 514-899-8452
marc.berruyer@vtl.quebecor.com

Olena Bilozerska
Network Planning Manager
TELUS
300 Consilium Place, 9th Floor
Scarborough, ON
Canada
M1H 3G2
Telephone: 416-279-8521
Olena.Bilozerska@telus.com

Doug Birdwise
Interested Party
109 Westpark Drive
Ottawa, ON
Canada
K1B 3G4
Telephone: 613-830-0081
douglas.birdwise@sympatico.ca

Samer Bishay
CEO
Iristel Inc.
11 Bowan Court
Toronto, ON
Canada
M2K 3A8
Telephone: 416-800-9999
Fax: 416-628-0891
sbishay@iristel.com

Joe Boutros
President
Globility Communications Corporation
108-5343 Dundas St West
Toronto, ON
Canada
M9B 6K5
Telephone: 416-385-0459
Fax: 416-385-0469
jboutros@globility.ca

Laurie Bowie
Network Planning
Bell Canada
162 Southfield Dr.
Strathroy, ON
Canada
N7G 3V6
Telephone: 519-245-8234
Fax: 519-245-5917
laurie.bowie@bell.ca

Glen Brown
Deputy Division Manager
SAIC Canada
60 Queen Street, Suite 1516
Ottawa, ON
Canada
K1P 5Y7
Telephone: 613-683-3291
Fax: 613-563-3399
browng@saiccanada.com

Melanye Caisse
Telecom Analyst
ISP Telecom Inc
1155 Boul Rene-Levesque Ouest Suite 2500
Montreal, QC
Canada
H3B 2K4
Telephone: 416-548-4819
Fax: 416-548-4818
melanye@isptelecom.net

Don Cavanagh
VP
Distributel Communications Limited
177 Nepean Street, Suite 300
Ottawa, ON
Canada
K2P0B4
Telephone: 613-237-7005
Fax: 613-237-7009
donald.cavanagh@distributel.ca

JF Champagne
Executive Director
Canadian Security Association, National Office
610 Alden Road, Suite 100
Markham, ON
Canada
L3R 9Z1
Telephone: 905-513-0622
Fax: 905-513-0624
jfchampagne@canasa.org

Fiona Clegg
CO Code Administration
SAIC Canada
60 Queen Street, Suite 1516
Ottawa, ON
Canada
K1P 5Y7
Telephone: 613-683-3285
Fax: 613-563-3399
cleggf@saiccanada.com

Mark Cuccia
317 Guilbeau Road, Apt.207-E
Lafayette, LA
USA
70506
Telephone: 504-460-0647
markjucuccia@yahoo.com

Jean-Marc D'Aoust
Consultant
Representative for Cogeco Cable Inc.
1720 rue Des Pins
Limoges, ON
Canada
K0A 2M0
Telephone: 613-443-1635
jmdaoust@cgocable.ca

Diane Dolan
Business Analyst
Distributel Communications Limited
177 Nepean Street
Ottawa, ON
Canada
K2P 0B4
Telephone: 613-212-5003
Fax: 613-237-7009
diane.dolan@distributel.ca

Jean-Michel Dupuis
Coordonnateur, Services Publiques
Rogers Communications
800 rue de la Gauchetiere Ouest, Suite 4000
Montreal, QC
Canada
H5A 1K3
Telephone: 1-866-501-7727
Fax: 1-800-506-3962
jeanmichel.dupuis@rci.rogers.com

J. David Farnes
Vice President, Regulatory Affairs
Canadian Wireless Telecommunications Association
(CWTA)
130 Albert Street, Suite 1110
Ottawa, ON
Canada
K1P 5G4
Telephone: 613-233-4888 ext. 106
Fax: 613-233-2032
documentcontrol@cwta.ca

Michael Gamey
Manager, Network Engineering
Public Mobile
1920 Yonge St, Suite 400
Toronto, ON
Canada
M4S 3E2
Telephone: 647-764-1400
Fax: 416-486-3269
michael.gamey@publicmobile.ca

J Edward Garner
FlexITy Solutions Inc.
45 Vogell Road, 8th Floor
Richmond Hill, ON
Canada
L4B 3P6
Telephone: 905-787-3548
Fax: 905-787-3599
ted.garner@flexity.ca

Jesse Gasteiger
ExaTEL Inc
128 Larch St., Suite 301
Sudbury, ON
Canada
P3E5J8
Telephone: 705-675-0400
Fax: 705-675-0404
jesse@vianet.ca

Anne Gertzbein
Manager Ancillary Services (411/911) & Local
PIC/CARE
MTS Allstream
200 Wellington Street West
Toronto, ON
Canada
M5V 3G2
Telephone: 416-640-5229
Fax: 416-640-5219
anne.gertzbein@mtsallstream.com

Marian Hearn
Project Executive
Canadian LNP Consortium Inc.
11-300 Earl Grey Drive, Suite 113
Kanata, ON
Canada
K2T 1C1
Telephone: 613-256-2600
Fax: 800-406-9250
marian.hearn@clnpc.ca

Pierre-Luc Hebert
Assistant General Counsel
Bell Canada
160 Elgin St.
Ottawa, ON
Canada
K1G 3J4
Telephone: 613-785-6363
p.l.hebert@bell.ca

Lynne Hewitson
Membership Manager
Canadian Security Association (CANASA)
610 Alden Road
Markham, ON
Canada
L3R 9Z1
Telephone: 905-513-0622 ext 223
Fax: 905-513-0624
membership@canasa.org

Larry Hishon
Vice-President Business Development
Fibernetics Corporation
583 Eastgate Walk
Waterloo, ON
Canada
N2K 2V9
Telephone: 519-571-7433
Fax: 519-772-5014
lhishon@fibernetics.ca

Stephanie Jackson
Manager - Public Services Integration; Traffic
Engineering
Rogers Communications
8200 Dixie Road
Brampton, ON
Canada
L6T 0C1
Telephone: 647-747-4402
Fax: 647-747-4557
stephanie.jackson@rci.rogers.com

Jasdev Kalsi
Facilities Coordinator
Rogers Communications
800 de la Gauchetiere St West Suite 4000
Montreal, QC
Canada
H5A 1K3
Telephone: 514-937-0102 Ext. 4209
jasdev.kalsi@rci.rogers.com

Suresh Khare
CO Code Manager
SAIC Canada
60 Queen Street, Suite 1516
Ottawa, ON
Canada
K1P 5Y7
Telephone: 613-683-3296
Fax: 613-563-3399
khares@saiccanada.com

Jeanne Lacombe
Senior Analyst
Canadian Radio-television and Telecommunications
Commission
Central Building Les Terrasses de la Chaudière 1
Promenade du Portage
Gatineau, QC
Canada
K1A 0N2
Telephone: 819-997-4586
jeanne.lacombe@crtc.gc.ca

Peter Lang
Sr. Manager, Intercarrier Relations
Rogers Communications
333 Bloor Street East
Toronto, ON
Canada
M4W 1G9
Telephone: 416-935-7918
Fax: 416-498-3002
Peter.Lang@rci.rogers.com

Stephen Lau
Voice Planning
MTS Allstream Inc.
MP-10A, 333 Main Street
Winnipeg, MB
Canada
R3C 3V6
Telephone: 204-941-6310
Fax: 204-774-3942
stephen.lau@mtsallstream.com

Sharon Ledwell
Director Carrier Interconnectiohn
Globalive Wireless Management Corp
207 Queen's Quay West
Toronto, ON
Canada
M5J 1A7
Telephone: 416-637-2374
Fax: 416-904-0480
sledwell@globalivewireless.com

Jeremy Lendvay
Senior Analyst
Canadian Radio-television and Telecommunications
Commission
1 Promenade du Portage
Gatineau, QC
Canada
K1A 0N2
Telephone: 819-997-4946
Fax: 819-953-3756
jeremy.lendvay@crtc.gc.ca

Natalie Lessard
SAIC Canada
60 Queen Street, Suite 1516
Ottawa, ON
Canada
K1P 5Y7
Telephone: 613-683-3288
Fax: 613-563-3399
lessardn@saiccanada.com

Carolina Lobelia
Network Analyst
Videotron General Partnership
2155 Pie IX
Montreal, QC
Canada
H1V 2E4
Telephone: 514-380-6923
Fax: 514-899-8452
carolina.lobelia@videotron.com

Bill Mason
Manager, Numbering Administration
Canadian Radio-television and Telecommunications
Commission
Central Building Les Terrasses de la Chaudière 1
Promenade du Portage
Gatineau, QC
Canada
K1A 0N2
Telephone: 819-953-8882
Fax: 819-953-0795
bill.mason@crtc.gc.ca

Deirdre Massiah-Gomes
Manager - Technology Strategy
TELUS
200 Consilium Place, Suite 1600
Scarborough, ON
Canada
M1H 3J3
Telephone: 416-279-9000
Fax: 416-279-3949
deirdre.massiah-gomes@telus.com

Andrew Matoga
President
ISP Telecom
1155 Boul Rene-Levesque O Suite 2500
Montreal, QC
Canada
H3B 2K4
Telephone: 416-548-4848
Fax: 416-548-4847
andrew@isptelecom.net

Tony McCarthy
Inter-carrier Operations
Public Mobile
, ON
Toronto
Telephone: 416-317-8984
Fax: 416-486-3269
Tony.McCarthy@publicmobile.ca

Kevin McGouran
Manager - Customer Translations
MTS Allstream
370 King Street, Floor 6
Toronto, ON
Canada
M5V 1J9
Telephone: 416-204-5868
Fax: 416-644-9864
kevin.mcgouran@mtsallstream.com

Keith McIntosh
Manager, Regulatory Affairs
Canadian Wireless Telecommunications Association
(CWTA)
130 Albert Street, Suite 1110
Ottawa, ON
Canada
K1P 5G4
Telephone: 613-233-4888 ext. 213
Fax: 613-233-2032
kmcintosh@cwta.ca

David McKeown
FlexITy Solutions Inc.
1668 Valentine Gdn. 8th Floor
Mississauga, ON
Canada
L5J 1H5
Telephone: 905-823-9996
Fax: 416-548-3351
regulatory@flexity.ca

Amor Mohammed
Director, RF Planning & Optimization
Globalive Wireless Management Corp
207 Queen Quay W, Suite 700
Toronto, ON
Canada
M5J1A7
Telephone: 647-260-1486
amohammed@windmobile.ca

Isabelle Morneau
Telecom Policy & Regulatory Affairs
TELUS
21st Floor, 10020-100 Street
Edmonton, AB
Canada
T5J 0N5
isabelle.morneau@telus.com

Khai Nguyen
Associate Director, Wireless Technology Planning
Bell Mobility
5099 Creekbank Road, 5N
Mississauga, ON
Canada
L4W 5N2
Telephone: 905-282-3298
Fax: 905-282-3337
khnguyen@mobility.com

Debby Olley
Globility Communications Corporation
108-5343 Dundas St West
Toronto, ON
Canada
M9B 6K5
Telephone: 416-238-8802
Fax: 416-385-0469
dolley@globility.ca

Francis Paje
Network Planner
Rogers Cable Communications Inc.
8200 Dixie Rd.
Brampton, ON
Canada
L6T 0C1
Telephone: 647-747-1868
Fax: 647-747-4140
francis.paje@rci.rogers.com

Robert Perozak
General Manager
Telnet Communications
105-50 Richmond Street East
Oshawa, ON
Canada
L1G 7C7
Telephone: 905-674-2000 x102
Fax: 905-728-7918
robert@telnetcommunications.com

Glenn Pilley
Canadian Numbering Administrator
SAIC Canada
60 Queen Street, Suite 1516
Ottawa, ON
Canada
K1P 5Y7
Telephone: 613-683-3289
Fax: 613-563-9293
pilleyg@saiccanada.com

Lucie Pugliese
Administrator
Numbering Alliance
1575 Saturne
Brossard, QC
Canada
J4X 1N4
Telephone: 450-465-8277
Fax: 450-465-0703
lucie.pugliese@sympatico.ca

Robert Quance
President
ISP TELECOM Inc.
630 René-Lévesque blvd. West, Suite 2360
Montreal, QC
Canada
H3B 1S6
Telephone: 514-726-1199
Fax: 514-484-3662
robert@isptelecom.net

Bruce Rebel
Associate Director Regulatory Affairs, Wholesale
Services
Bell Canada
160 Elgin Street, 19th Floor
Ottawa, ON
Canada
K2P 2C4
Telephone: 613-785-1406
Fax: 613-560-0472
bruce.rebel@bell.ca

Karen Robinson
Telus Mobility
200 Consilium Place
Scarborough, ON
Canada
M1H 3J3
Telephone: 416-279-3053
Karen.Robinson3@telus.com

Bill Sandiford
TelNet Communications
50 Richmond St E
Oshawa, ON
Canada
L1G7C7
Telephone: 905-674-2000 Ext 100
Fax: 905-728-7918
bill@telnetcommunications.com

Leo Santoro
Network Analyst
Bell Mobility
5099 Creekbank Rd
Mississauga, ON
Canada
L4W 5N2
Telephone: 905-282-3021
Fax: 905-282-3106
leo.santoro@bell.ca

Rick Schleihauf
Vice President - Carrier Relations
Fibernetics Corporation
605 Boxwood Drive
Cambridge, ON
Canada
N3E 1A5
Telephone: 519-804-3000
Fax: 519-653-7686
rschleihauf@fibernetics.ca

Donna Sguigna
Manager - National Numbering Solutions
Bell Canada
100 Borough Dr Floor 5 Blue
Scarborough, ON
Canada
M1P 4W2
Telephone: 416-296-6172
Fax: 416-296-0685
donna.sguigna@bell.ca

Ofir Smadja
President
COMsolve
3601 Highway 7 East, Suite 400
Markham, ON
Canada
L3R 0M3
Telephone: 416-915-5008
info@comsolveinc.com

Brian Smith
Assoc. Director Wireless IP Networks Technology
Planning
Bell Canada (Bell Mobility)
, ON
Canada
Telephone: 905-282-3241
Fax: 905-282-3271
b.smith@bell.ca

Brenda Stevens
Director - Intercarrier Relations
Rogers Communications
333 Bloor St. East, 9th Floor
Toronto, ON
Canada
M4W 1G9
Telephone: 416-935-4898
Fax: 416-935-4875
brenda.stevens@rci.rogers.com

Ian Stevens
Operations Manager
Execulink Telecom Inc.
619 Main Street North, Box 33
Burgessville, ON
Canada
N0J 1C0
Telephone: 519-456-7800
Fax: 519-456-7801
istevens@execulink.com

Peter Szabo
Engineer II - Voice Traffic Engineering
TELUS
5th Floor, 3777 Kingsway
Burnaby, BC
Canada
V5H 3Z7
Telephone: 604-695-3188
Fax: 604-663-1300
peter.szabo@telus.com

Bogdan Tanasie
Manager, Traffic and Facilities Planning
Rogers Communications
8200 Dixie Road
Brampton, ON
Canada
L6T 0C1
Telephone: 647-747-1614
bogdan.tanasie@rci.rogers.com

Nicholas Theriault
Manager - Network Engineering & Development
ISP Telecom
1155 boul. Rene-Levesque W. #2500
Montreal, QC
Canada
H3B 2K4
Telephone: 416-548-4646
Fax: 416-548-4645
ntheriau@isptelecom.net

Gerry Thompson
Manager, Intercarrier Relations
Rogers Communications
333 Bloor Street East, 9th Floor
Toronto, ON
Canada
M4W 1G9
Telephone: 416-935-5239
Fax: 416-935-7719
Gerry.Thompson@rci.rogers.com

Kathleen Turnsek
ExaTEL
222 McIntyre Street West, Suite 505
North Bay, ON
Canada
P1B 2Y9
Telephone: 705-474-3364
Fax: 705-472-9202
kturnsek@vianet.ca

Nina Wang
Senior Project Manager
DAVE Wireless
101 Exchange Ave
Vaughan, ON
Canada
L4K 5R6
Telephone: 416-736-3802
nina.wang@davewireless.com

Kim Wardle
Manager, Competition Implementation & Technology
Canadian Radio-television and Telecommunications
Commission
1 Promenade du Portage
Gatineau, QC
Canada
J8X 4B1
Telephone: 819-997-4945
Fax: 819-994-0218
kim.wardle@crtc.gc.ca

Deena Wilson
Executive Assistant
Execulink Telecom
619 Main Street North
Burgessville, ON
Canada
N0J 1C0
Telephone: 519-456-7266
Fax: 519-456-7814
deena@execulink.com

Tom Wong
Globility Communications Corporation
108-5343 Dundas St West
Toronto, ON
Canada
M9B 6K5
Telephone: 416-238-8802
Fax: 416-385-0469
twong@globility.ca

Ayman Youssef
VP Marketing
Globalive Wireless Management Corp
207 Queen's Quay W
Toronto, ON
M5J 1A7
Telephone: 647-700-9724
Fax: 416-987-1203
ayoussef@windmobile.ca

Clayton Zekelman
Managed Network Systems Inc.
3363 Tecumseh Rd. E.
Windsor, ON
Canada
N8W 1H4
Telephone: 519-985-8410
Fax: 519-985-8409
clayton@mnsi.net

Tom Zimnicki
Chief Technology Officer
Fibernetics Corp
55 Northfield Dr East Suite 210
Waterloo, ON
Canada
N2K 3T6
Telephone: 519-489-6700
tom@fibernetics.ca