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**Task Title: Report of inclusion of unused numbers from previously assigned CO Codes in pool**

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Canadian Interconnection Steering Committee (CISC)

Canadian Steering Committee on Numbering (CSCN)

TIF 119 [Non-] Consensus Report CNRE1XX: Inclusion of unused numbers from previously assigned CO codes to the number pooling inventory

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 Executive Summary

# Scope

# Background

# Additional considerations for inclusion of unused numbers from previously assigned CO Codes

[Identify what must be done/decided for TBP including previously assigned codes as compared to TBP for new assignments, who must implement the additional functions (i.e., industry bodies, all carriers, specific carriers etc)]

# Timing of implementation

[Analysis and recommendations regarding whether implementation should proceed with TBP initially or shortly thereafter, and if the latter, how long that might be. Analysis should consider:

* what the impact on code consumption might be due to a deferring inclusion;
* increased implementation risks due to inclusion;
* other ]

# Implementation options

[Analysis and recommendations regarding each of the bulleted issues in para 66.

In each case, there are specific concerns raised by interveners which led to the CRTC’s request. The analysis of each issue should address these concerns specifically.]

# Level of Contamination

Telephone numbers classified as Administrative, Aging, Assigned, Intermediate or reserved are included in the contamination calculations.

In the US, thousands-blocks contaminated up to and including ten percent are eligible for donation/return. The US industry is currently considering raising the contamination level.

The CSCN recommends that the Canadian industry should start with a ten percent contamination level and review the need for a potential increase in the future.

# Cleanup of previously assigned codes

The CSCN believes that an initial audit and general cleanup for all LNP exchanges must be mandatory for CO Code Holders to complete prior to the implementation of thousands-block pooling.

In the US, Carriers file semi-annual telephone number utilization reports along with their NRUFs and forecasted demand. Having an assessment of number utilization by Exchange Area is the starting point for any necessary clean-up process.

As excess inventory is determined in part by forecasted demand, the CSCN recommends semi-annual utilization reports be submitted to the CNA which will trigger further clean-up as appropriate.

# Return of number blocks

The CSCN recommends that the process for thousands-blocks requested but not put in service within 6 months should be treated in the same manner as CO Codes.

A Thousands-Block assigned to a Carrier by the Pool Administrator must be placed In-Service within 6 months after the initially published Effective Date of the Thousand-Block Activation. If the Block Holder no longer has a need for the Thousand-Block, the Block Holder must return the Thousand-Block to the Pool Administrator for reassignment. If it is determined through an audit process or other means that a Thousand-Block is not in use 6 months after the Effective Date, the CO Code reclamation procedures will apply.

Based on the Carrier’s regular audit and cleanup activities, donations of excess inventory may be required. Which blocks of the excess inventory to be donated is at the discretion of the Carrier subject to the contamination thresholds and not based on individual block usage history.

# Hindrances to reuse of telephone numbers

In their intervention to Telecom Notice of Consultation CRTC 2023-92, Iristel identified potential encumbrances that might hinder the reuse of telephone numbers (e.g. Short Message Service [SMS] listings, National Do Not Call List listings, 4-1-1 listing, the 90-day disconnect blackout period and burned numbers).

Customers often port their wireline number to a wireless carrier to obtain SMS Capability. NetNumber maintains a database of SMS capable numbers. If the numbers are not removed prior to a block donation, this could cause issues if the new block holder is a wireline carrier.

Numbers added to the National Do Not Call List do not expire and will stay on the list indefinitely until the customer removes it from the list. This issue exists today and is not specific to Thousands-Block Pooling.

Due to the slow response time to remove 4-1-1 directory listings, the new block holder may encounter delays in listing the number for their new customer. This issue exists today and is not specific to Thousands-Block Pooling.

There were concerns that numbers would be included in a block donation before the 90-day aging period was complete. This could cause problems if the CO Code Holder’s customer wanted their number back before the aging period was finished.

CSCN participants agreed that the minimum aging period will be 60 days with a maximum aging period of 120 days. Each service provider will have the flexibility to determine their aging period between the agreed upon minimum and maximum aging periods.

CSCN agreed that Aging Numbers are to be included in the determination of block contamination levels. CSCN recommends that the telephone number aging period must be completed prior to returning a block to the pool.

Burned numbers include numbers that are blocked as spam, block listed on social media, and numbers with a bad reputation identified in STIR/SHAKEN analytics. The “burned” numbers carry a history that may make them unsuitable for reuse by another customer. These issues exist today and are not specific to Thousands-Block Pooling. Should “burned” numbers be part of the contamination level?

**Question: Whether and how to curtail or prohibit the one and done approach in the case of IoT and other services.**

In the CNAC intervention to Telecom Notice of Consultation CRTC 2023-92, they submitted that “one and done” refers to a number assigned to a thing, like a vehicle, and when the thing is no longer in use, the number does not go back into the number pooling inventory.

CNAC submitted that in order for number pooling to have the best chance at achieving number conservation, a mechanism should be put in place to protect against inefficient assignment of numbers. Another consideration for previously assigned CO Codes could be applied to the rapidly growing IoT business. The assignees of numbers would need to have a TN reclamation process, especially if the numbers are sub tendered to a third party after being originally assigned to the CO code holder. Either the CO code holder or the third party should have a reclamation/reassignment process vs. a one and done philosophy. If “one and done” is eliminated, this may help to delay the exhaust of the 6YY NPAs and/or also geographic CO codes.

Should these numbers be included as part of the contamination level or should there be established rules for a reclamation/reassignment process?

In Quebecor’s invention to Telecom Notice of Consultation CRTC 2023-92, they stated that there were technical issues preventing them from using non-geographic numbers for IoT and M2M services due to the use of messaging service (SMS) by IoT and M2M devices. The technical aspect of the delivery of SMS without a telephone number in Canada would need to be analyzed and changes to the wireless network as a whole would need to be made.

Iristel indicated in their intervention that the Commission should review the rules applicable to non-geographic numbers. They also indicated that it is not currently possible to send calls or text messages to and from non-geographic numbers belonging to different providers. Iristel indicated that the Commission should consider mandating interconnection for non-geographic numbers.

Quebecor didn’t see any technical reasons why calls or text messages cannot or should not be sent to and from non-geographic numbers belong to different providers. They agreed with IristTel that the CRTC should make interconnection mandatory for non-geographic numbers.

# Changes to snap-bac

Modifications to NPAC must be completed to accommodate thousand block pooling in the Canadian Region. The CLNPC plans to turn on the 2017 Neustar Functional Requirement Specification (FRS) for Thousand Block Pooling. This implementation will also include any updates made to the Canadian NPAC since that time. A decision will be made in the coming weeks on whether to proceed with this approach. If this solution is approved by the CLNPC shareholders, the installation can be completed by end of 2024, giving service providers ample time to test their LSMS updates.

Prior to the Thousands-Block Pooling implementation, all Service Providers must update their LSMS to support receipt of Thousands-Block record information from NPAC. Testing LSMSs must be completed prior to the TBP implementation to ensure proper configuration to Receive and Process Thousands-Block records. Testing can be coordinated with the CLNPC & Neustar.

Service Providers must also ensure their SCP LNP Applications (which access locally stored LSMS data) support Thousands-Block records from the LSMS.

CLNPC members are investigating whether existing SCP LNP GTT functions and the GTT distribution process will continue to work in a Thousands-Block Pool environment, and if not, identify what changes are required.

 Additional snap back processes will be implemented with Thousands-Block Pooling.

When a contaminated Thousands-Block has been donated to the pool, and a previously ported out number is snapped back, the number will return to the new owner of the Thousands-Block.

If a donated Thousands-Block has not yet been assigned to a new block holder, a previously ported out number will snap back to the CO Code holder. When the CO Code holder receives the notification that the number snapped back, the CO Code holder cannot put the returned number back in their inventory for reassignment as the number now belongs to the Pool. The Code Holder receives the snap back notification to provide vacant number treatment.

# Considerations for smaller carriers

[8th issue]

# Other considerations

[Add sections as needed]

# Conclusions

# Recommendations

# Matters for Further Consideration

# Terms and Acronyms[May not be needed. If only a few terms need definition, define them at the first use. Stick with terms as used in the Policy if possible.]

# Contributions

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| --- | --- | --- |
| **Contribution Name** | **Submitter** | **Date Posted** |
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# CSCN TIF 119 Participants

The CSCN recognizes the participation and contributions from the following participants:

|  |  |
| --- | --- |
| Organization | Name & Specific Roles |
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