

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of
Numbering Resource Optimization

)
)
)
)

CC Docket No. 99-200

**PETITION BY THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION
FOR ADDITIONAL DELEGATED AUTHORITY
TO IMPLEMENT NUMBER OPTIMIZATION MEASURES IN THE 603 AREA CODE**

New Hampshire benefits from a vibrant telecommunications market. New Hampshire residents have competitive local access for internet services in all areas of the state, and in many parts of the state residential and business customers enjoy access to various cellular carriers as well as bundled cable TV, internet, and phone options.

One of the unintended consequences of such a vibrant telecommunications market is that, in recent years, the demand for numbering resources has grown significantly. Consider this: many individuals report having four distinct telephone numbers assigned for their use (e.g., a residential line – whether VOIP or landline – a business line, a personal cell phone, and a business cell phone). Additional demands on numbering resources include telephone numbers that may be assigned to a variety of services such as alarm systems, mobile internet access, fax machines, and nomadic VoIP services.

Based on that increased demand, New Hampshire's numbering resources are not being used efficiently due to the antiquated number assignment system and pressure to allocate numbers without regard to any physical nexus. The New Hampshire Public Utilities Commission ("NHPUC") respectfully requests that the Federal Communications Commission ("Commission" or "FCC") grant it additional authority to implement certain telephone number conservation measures to ensure that the 603 area code is fully and efficiently utilized. The NHPUC intends to use any authority granted to defer for a significant period, or possibly even eliminate, the consumer confusion and expense associated with introducing a new area code in the state, consistent with the guidance of the Commission and its staff on supporting the evolving uniform national numbering system.

As set forth in more detail below, the NHPUC seeks authority to:

- 1) implement individual telephone number pooling;
- 2) establish the pooling administrator¹ as the holder of blocks for assignment of individual numbers when fewer than 100 numbers are requested by a carrier; and
- 3) implement single number pooling trials using existing software and methods.

I. Background

New Hampshire is a rural state with 149 rate centers. Nearly one third (48) of those rate centers are home to fewer than 2,000 people, yet 21 of the low-density rate centers have two or more central office codes assigned, due to the requirement that each competing carrier in an area be assigned no fewer than 1,000 numbers, irrespective of how many numbers the carrier plans to utilize. This inefficiency is not limited to the small rural rate centers. For example, the Town of Derry, New Hampshire, with a population of 33,400, historically had about 30,000 telephone lines (2001 estimate). Yet Derry has 28 NXX codes assigned to it, representing a theoretical pool of 280,000 numbers – enough numbers to provide every resident with seven or more unique, geographically-relevant telephone numbers.

Between 1998 and 2002, the FCC implemented a variety of conservation measures and relief intended to extend the life of the North American Numbering Plan (NANP) and conserve individual area codes. Since that time, thousand-block pooling and local number portability have been implemented and become routine in the industry, notwithstanding the wide variety of services and types of carriers involved. New Hampshire was an early adopter of thousand-block number pooling. At the time of its 1998 request, the 603 area code was in jeopardy, and the NHPUC was advised that adopting thousand-block pooling was unlikely to happen soon enough to have any real impact. As a result of adopting pooling, the 603 area code exhaust date is now 2034.² The Regional Bell Operating Company in New

¹ The NHPUC is aware that Neustar has been replaced by Somos as the pooling administrator under a bridge contract until the final contract is awarded by RFP. The NHPUC believes the timing may be right to include individual telephone number portability administration in the RFP for the new pooling administrator.

² October 2018 NPA Exhaust Analysis, Issued by the NANPA found at https://www.nationalnanpa.com/reports/2018-2_NPA_Exhaust_Projections_Final.pdf.

Hampshire, now Consolidated Communications, implemented permanent local number portability in 1999 as Bell Atlantic, and local number portability has continued smoothly through two acquisitions and the designation of a new portability administrator. Similarly, thousand-block pooling has operated nationwide, essentially trouble-free, since 2002.

The Commission's efforts at that time had immediate impact on the NANP and individual area code months-to-exhaust calculations. As a result, New Hampshire (along with seven other states) has kept its single area code. More important, the NANP as a whole is projected to be sufficient until 2048³. This date could be extended by further action to improve the efficiency of number assignments. The numbering rules of the plan allow for 6.4 billion telephone numbers, which is theoretically more than enough to allow each of the approximately 412 million current residents of the areas served by the plan to have access to multiple numbers. However, a considerable percentage of numbers will remain unused when the last available Numbering Plan Area (NPA) code (e.g., "area code") is assigned, due to inefficient utilization, as described above. As technology continues to advance and the need for telephone numbers continues to expand, the NHPUC would like to further the goal of number utilization optimization.

In the process of evaluating various relief measures two decades ago, the North American Numbering Council (NANC) and the Commission considered individual telephone number (ITN) pooling, also known as "real-time" numbering assignment. The process for implementation of ITN pooling was outlined by the Alliance for Telecommunications Industry Solutions (ATIS), Industry Number Committee (INC) in its *Initial Report to the NANC on Number Pooling* (ATIS-0300063) issued December 4, 1997 (*Initial Pooling Report*). In the *Initial Pooling Report*, ATIS makes a distinction between "batch numbering resources" (e.g., thousand-block pooling), a process that provides blocks of numbers to individual carriers to hold in inventory until needed, and "real-time numbering resources," a

³ October 2018 North American Numbering Plan (NANP) Exhaust Analysis, Issued by the North American Numbering Plan Administrator (NANPA) found at https://www.nationalnanpa.com/reports/October_2018_NANP_Exhaust_Analysis_Final.pdf.

process by which numbering resources are taken as needed from a pool available to all carriers. See *Initial Pooling Report*, p. 11. At the time, the concern for assigning geographically-relevant telephone numbers was more pressing: long distance services were most frequently charged on a call-by-call basis. Changes in service offerings and technology have made geographic relevance less important. We now have the advantage of experience proving that pooling can be implemented effectively. The NHPUC believes that the implementation of ITN pooling will readily build on what is already in place, and that ITN pooling can be implemented on a trial basis to determine if there are any barriers to full adoption.

The current thousand-block pooling system, based on inventories of numbers assigned to carriers, is already well-suited to ITN pooling and real-time number assignment. In the implementation of real-time individual number assignment, the NANPA would act as the block holder and numbers would be issued as requested. The NHPUC believes this would have an immediate impact on the efficient use of numbers. For instance, New Hampshire's Numbering Resource Utilization Forecast (NRUF) shows that, of the 50 service providers with assigned numbers, only nine providers utilize more than half of their number assignments. Roughly 60% of the numbers in already-activated codes and blocks in the 603 area code would be available for assignment if number assignment procedures allowed carriers to draw numbers more efficiently.

II. Discussion

The Commission has always expressed interest in working cooperatively with state commissions to develop solutions. Accordingly, the NHPUC respectfully requests that, with regard to the 603 area code, the Commission grant authority to initiate a trial of ITN pooling in New Hampshire.

The NHPUC believes that ITN pooling, in conjunction with the current pooling system, would allow the unfettered assignment of numbers to all users who want them, but also would forestall the premature exhaust of the respective NXX codes, thereby delaying or even making unnecessary the introduction of a new area code for the state. The exercise of such delegated authority, once granted,

would be performed in compliance with any guidelines or national rules established by the Commission and in collaboration with industry participants.

As described above, New Hampshire has experienced a sharp increase in demand for numbers over the past decade. As a rural state, 80% of the state's active NXX codes are assigned to areas with populations of 10,000 or fewer residents. Providing numbers for the use of carriers that wish to compete in a smaller exchange requires assigning a full block of one thousand numbers to each of them, and ultimately opening a new NXX code should more than nine competitors have interest, which is quite common. That action removes an entire code from inventory, which remains open and underutilized even if the blocks are returned to the pool. Similarly, carriers requesting a Local Routing Number (LRN) are required to open an entire NXX code.

The NHPUC reviews every application from carriers under its jurisdiction, and carefully manages number assignments in the state. The NHPUC watches closely how numbers are pooled and assigned, and has observed that VoIP and other competitive carriers often do not need a thousand numbers to serve the few customers they have identified, but have to take them nevertheless. ITN pooling would also allow for more efficient and more consistent processes for telephone number assignments, reducing discrepancies in process between carriers under NHPUC jurisdiction and those under Commission jurisdiction. ITN pooling would allow fewer NXX codes to be opened, preserving those limited resources and ultimately avoiding the opening of an additional area code in the state. A new area code would be greatly underutilized in New Hampshire, and would be more efficiently used in a state with higher demand for numbers.

The process for ITN pooling was set out by the Number Resource Optimization Working Group in its Report to the NANC on October 20, 1998. At the time, local number portability was in its infancy, and much of the technical discussion regarding ITN pooling took place in the context of little familiarity and experience with local number porting. That is not the case today, but there are a few differences that need to be considered between block pooling as it is currently administered and ITN pooling:

- 1) The pooling administrator would need to manage ITN pooling separately from block pooling in order to track numbers; apart from this separate tracking mechanism, the numbers would otherwise be assigned using existing software and methods;
- 2) An ITN pool of numbers would have to be populated, which could be done with donations from both contaminated and clean blocks;
- 3) The pooling administrator would have to be designated as the holder of blocks from which individual numbers would be assigned when fewer than 100 numbers are requested by a carrier; and
- 4) The Local Exchange Routing Guide (LERG) would need to reflect the pooling administrator as a holder of numbers.

LRN assignment and routing would be unaffected by the implementation of an ITN pooling trial. Service providers who need small quantities of numbers would benefit because they would no longer have to wait for a new NXX code to be activated simply because contaminated blocks are assigned to other service providers.

III. Conclusion

There is no shortage of telephone numbers in New Hampshire or in the NANP. With proper planning and management, New Hampshire should be able to retain "603" as its sole area code for decades to come, and has the potential to outlive the NANP, but there is a threat to that future. The chief source of the problem is the inefficient way in which numbering resources are allocated, requiring the assignment of 1,000 numbers to requesting carriers, even if the carrier has need for only a few numbers.

New Hampshire has had a single area code in place since the inception of the NANP, devised by the former Bell System in 1947. Its area code is closely linked in the public mind with the state. The tourism and recreation industries, two key economic drivers, rely on the identification between the area code and the state in their marketing and advertising. More than two hundred businesses in New Hampshire use "603" in their business name to represent their affiliation to the state, and younger

residents have adopted “the 603” as a shorthand way to express their location on social media. The New Hampshire legislature acknowledged the importance of the area code to the state’s identity in New Hampshire RSA 374:59, which requires the NHPUC, among other things, to “promote and adopt telephone number conservation measures to the maximum extent allowed by federal law for area code 603.”

A new area code, even an overlay, which is the least disruptive new area code option, would cause disruption and impose costs on businesses and residents, and could create additional burdens on new competitive entrants. New Hampshire’s area code can support 7.7 million telephone numbers, and today there are only 3.4 million numbers in use in the state, supporting a population of 1.3 million people. If the remaining numbers could be used more efficiently, all carriers could satisfy their needs for numbering resources, without putting customers through the disruption and expense of imposing a new area code. The area code is currently not in jeopardy, but the number of months to exhaust keeps shrinking. The Commission could use New Hampshire as a “test bed” to identify any drawbacks to the implementation of ITN pooling, or as a “proof of concept” to demonstrate the next step forward toward efficient number utilization for broader application throughout the NANP.

Twenty years ago, the Commission made the decision to implement thousand-block pooling, despite objections and predictions that pooling would have little impact on the availability and exhaust of numbers for an area code already nearing exhaust (as area code 603 was in in that time frame). The Commission made the right decision then, and it has the opportunity to do so again.

In conclusion, the NHPUC requests that the Commission grant the instant petition for additional delegated authority to implement ITN pooling on a trial basis.

Respectfully submitted,

New Hampshire Public Utilities Commission

By: David K. Wiesner
David K. Wiesner, Esquire
Legal Division Director

Date: April 26, 2019

