NOWG NANC Action Item Request
Nationwide Non-geographic Number Portability

The NOWG was tasked with the following two action items from the North American Number Council (NANC) in connection with analyzing Nationwide Non-geographic Number Portability.

- Issue #1 – Potential impacts to the life of the North American Numbering Plan (NANP).
- Issue # 2 – Numbering Resource Utilization and Forecasting (NRUF) form impacts.

To assist the NOWG with these action items, a liaison was sent to the NANPA for their input on impacts to the life of the NANP and NRUF.

Issue #1 – Impact on the life of the NANP

In examining this issue, NANPA used the definition of non-geographic number portability contained in the NANC LNPA Working Group's White Paper on Non-Geographic Number Portability, dated February 19, 2015. In this paper, non-geographic number portability

> *"refers to the ability of users of telecommunications services to keep their assigned telephone numbers when relocating within the United States, regardless of the Rate Center associated with the phone number's origin, or the distance between the associated Rate Center and the end user's physical location. In other words, an end user could retain a phone number when moving to a new physical location within the same local access transport area (LATA), within the same State or in a different State."*

The following assumptions were used by the NANPA in addressing the potential impact of non-geographic number portability on NANP exhaust:

1. There are no changes to the assignment process for central office codes and thousands-blocks with the implementation of non-geographic porting. That is, central office codes and thousands-blocks are assigned to an authorized service provider, identified with a unique Operating Company Number (OCN), in a designated rate center within a geographic area code.
2. Thousands-block number pooling continues at the rate center level.
3. The Location Routing Number (LRN) functionality will be used in support of non-geographic number portability. Further, the ten-digit format of an LRN remains the same and is assigned from a valid NPA-NXX that has been uniquely assigned to the service provider by NANPA. The NPA-NXX portion of the LRN is used to route calls to numbers that have been ported.
4. Only "assigned" numbers[1] may be geographically ported outside of the rate center.
5. Assigned numbers geographically ported outside the rate center that become unassigned will be returned to the code/block holder and made available for re-assignment after the appropriate aging period.

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[1] Assigned numbers are numbers working in the PSTN under an agreement such as a contract or tariff at the request of specific end users or customers for their use, or numbers not yet working but having a customer service order pending (Source: Central Office Code (NXX) Assignment Guidelines, dated 1/4/16).

The basic premise of non-geographic number portability, from a number exhaust perspective, is it permits a number already assigned to a customer to remain assigned when the customer geographically locates outside the rate center to which the number was originally assigned.

It should be noted that since the number is already assigned, porting the number to another geographic location has no impact on the overall quantity of numbers assigned in the NANP and thus no additional effect on NANP exhaust.

Non-geographic number portability could potentially impact individual area code exhaust. In today's environment, wireline customers relocating outside a rate center will return their existing number and be assigned a number corresponding to their new rate center. With non-geographic number portability, wireline customers would have the capability to retain their wireline number. Assuming they did retain their number and re-located outside their area code (e.g., a Washington DC 202 NPA customer relocates to Tampa, FL 813 NPA), the 202 number would remain assigned and not become available to another 202 customer. Without these numbers returning to the 202 NPA inventory, the exhaust of the 202 area code will be accelerated.[2] However, since the re-locating customer took their number with them, their need for a number from the area code to which they re-located would be eliminated. As a result, using the example above, even though both the old NPA (202) and the new NPA (813) are impacted by non-geographic number portability, the overall effect on the NANP is zero.

There are two elements associated with number portability that may impact the life of the NANP. The first item centers on the assumption of the use of the LRN in support of non-geographic number portability. Per the INC LRN Assignment Practices, an LRN is a 10-digit number, in the format NPA-NXX-XXXX, that uniquely identifies a switch or point of interconnection (POI) per LATA. The NPA-NXX portion of the LRN is used to route calls to numbers that have been ported. Further, the LRN must be selected and assigned from a valid NPA-NXX that has been uniquely assigned to the service provider by the Central Office Code Administrator and published in the LERG Routing Guide. As such, when a carrier needs an LRN, it must be assigned a unique NPA-NXX from which to assign the 10-digit LRN. If non-geographic number portability requires the assignment of additional LRNs, over and beyond what is needed today, both NPA and NANP exhaust will be negatively impacted. Conversely, if additional LRNs are not needed or an LRN is not required to support non-geographic number portability, the life of individual NPAs and the NANP would not be impacted.

The second element pertains to the use of rate centers for number pooling. The assumptions state that number pooling continues at the rate center level. If non-geographic number portability leads to geographically broader number pools (e.g., NPA, state, LATA), expectations are the life of individual NPAs and thus the NANP would be extended.

Finally, the NOWG question specifically refers to the impact of non-geographic number portability on the life of the NANP. It does not request NANPA input on the impact of non-

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[2] In today's environment, wireless customers presently have the capability to retain their number when geographically re-locating to another area code, thus accelerating the exhaust of the area code from which their number is assigned.

Issue #2 – Impact on the NRUF Form 502

The Numbering Resource Utilization and Forecast (NRUF) reporting process was established as the primary method for obtaining from service providers detailed utilization data for all assigned geographic and non-geographic (5XX and 9YY NPAs) central office codes and thousands-blocks. Specific reporting definitions and direction were included in the FCC Numbering Optimization Orders[3] and are incorporated in the FCC's NRUF Form 502. In addition, service providers provide a forecast of central office codes and thousands-blocks by rate center as input into the development of area code exhaust projections.

In examining the impact of nationwide, non-geographic number portability on the Form 502, NANPA used the following assumptions:

1. There are no changes to the assignment process for central office codes and thousands-blocks with the implementation of non-geographic porting. That is, central office codes and thousands-blocks are assigned to an authorized service provider, identified with a unique Operating Company Number (OCN), in a designated rate center within a geographic area code.
2. There are no changes in the current NRUF submission methods as the result of non-geographic number portability.
3. There are no changes to the descriptions for utilization and forecast reporting found on the Instruction tab for the Form 502 (e.g., description of carrier types, number usage categories, initial vs. growth resources, etc.).
4. Service providers are required to report utilization using the five usage categories included on the Form 502: Assigned, Aging, Administrative, Intermediate, Reserved and Available. No additional utilization categories will be created and included on the Form 502 with the implementation of non-geographic number portability.
5. A telephone number must be assigned in accordance with the definition of "assigned number" found on the Instructions tab of the Form 502 in order for the number to be geographically ported.

Based upon the above assumptions, service providers would continue to report on assigned NPA-NXX and NPA-NXX-X using the appropriate Utilization form. Rate center designation would continue to be provided by the carrier. Further, carrier forecasts would consist of the quantity of central office codes and/or thousands-blocks required over the prescribed time period as detailed on the individual forecast workbooks included on the Form 502. Finally, numbers that are geographically ported outside the rate center would be reported as "Assigned" for the specific code/block on the appropriate Utilization workbook of the Form 502. Consequently, no changes

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[3] CC Docket No. 99-200, In the Matter of Numbering Resource Optimization, Report and Order and Further Notice of Proposed Rule Making, adopted March 13, 2000, released March 31, 2000

would be needed to the NRUF Form 502 to account for nationwide, non-geographic porting of a telephone number.