Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)
	)
Nationwide Number Portability	) WC Docket No. 17-244
	)
Numbering Policies for Modern Communications	) WC Docket No. 13-97

COMMENTS
OF
WTA – ADVOCATES FOR RURAL BROADBAND

WTA – Advocates for Rural Broadband

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Dated: December 27, 2017

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SUMMARY

WTA – Advocates for Rural Broadband ("WTA") proposes that, if the Commission determines to proceed toward nationwide number portability at this time, it do so in discrete steps. Specifically, the Commission should start with the wireless sector that has developed effective location tracking processes and that already uses telephone numbers that have become increasingly personal and non-geographic in nature. WTA recommends that the Commission wait to address nationwide wireline number portability until it has completed its resolution of the foreseen and unforeseen problems of implementing nationwide wireless number portability and until the ongoing transition from Time Division Multiplexed ("TDM") voice services to more portability-compatible Voice over Internet Protocol ("VoIP") services proceeds further.

WTA opposes elimination of the existing N-1 query requirement unless and until the Commission fully considers the benefits and costs of nationwide wireline number portability, determines to mandate it, and selects a method that actually requires elimination of the N-1 query rule. WTA does not oppose the equitable extension to CLECs of forbearance from the application of all remaining equal access and dialing parity requirements for interexchange services, or the elimination of the grandfathered exceptions from dialing parity forbearance impacts for customers who continue to be presubscribed to stand-alone long distance services.

WTA believes that the costs and benefits of the National Local Routing Number option, the full-fledged nationwide number portability option, need to be studied carefully, particularly before proceeding with wireline portability. Wireline telephone numbers have long been associated predominately with specific geographic areas and locations, and commonly used by a variety of entities to estimate general and/or precise locations for various purposes. Moving

from today's service provider portability to nationwide location portability will require RLECs and other wireline carriers to make substantial and expensive changes in call completion facilities and functions, including modification of switching, call routing and billing hardware and software and resolution of call completion problems, at a time when they are struggling to meet broadband demand and build-out requirements with insufficient (and in many cases, unpredictable) USF support. In addition, emergency police, fire and medical responders have long relied upon originating wireline telephone numbers to determine the exact locations to which assistance must be sent when every moment can be critically important. Finally, large segments of the public have long used wireline telephone numbers to estimate whether the voice call they are considering will be a free local call or a long distance toll call.

WTA finds the Non-Geographic Location Routing Number alternative interesting, and observes that it appears to be much less complicated and expensive to implement. However, it also appears to work prospectively only, such that customers do not appear to be able to retain their wireline telephone number after a move to a distant community unless they had previously changed their existing number to a non-geographic number in the new non-geographic area code(s) established for nationwide portability purposes.

Finally, WTA opposes the "commercial agreements" option due to the historic difficulty encountered by RLECs in negotiating and obtaining agreements with large carriers, and the GR-2982-CORE option because it appears to be a complex and expensive undertaking that does not significantly improve upon the location identification and call routing capabilities of the tested and familiar NPA-NXX-XXX system.

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COMMENTS
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WTA – Advocates for Rural Broadband ("WTA") hereby submits its comments in response to the Commission's Notice of Proposed Rulemaking and Notice of Inquiry (*In the Matter of Nationwide Number Portability et al.*), WC Docket Nos. 17-244 and 13-97, FCC 17-133, released October 26, 2017.

The Commission's proposal to consider nationwide number portability appears to be focused primarily upon wireless telephone numbers. As an association of wireline tele-communications carriers, WTA is not taking a formal position supporting or opposing nationwide wireless number portability. It recognizes that wireless networks have developed effective location tracking capabilities, and that they appear able currently to find and complete calls to and from wireless customers as they travel throughout substantial portions of the nation. WTA is also aware that wireless telephone numbers have moved far along the road toward becoming personal telephone numbers for many individuals, and that it is relatively common for wireless customers (at least customers of particular carriers) to keep the same wireless telephone

number as they relocate (often, multiple times) to various communities and states throughout the United States.

However, conditions are very different with respect to the wireline telephone numbers assigned and used by WTA's rural local exchange carrier ("RLEC") members. The area codes ("NPAs"), local telephone exchange ("NXX") numbers and specific customer numbers ("XXXX") employed by RLECs and other wireline carriers have long been associated predominately with specific geographic areas and locations, and commonly have been used by a variety of entities to estimate the general and/or precise locations of wireline telephones and users for various purposes. Moving from today's service provider portability to full location and intermodal portability will require RLECs and other wireline carriers to make substantial and expensive changes to call completion facilities and functions, including switching, call routing and billing, and to address potential foreseen and unforeseen call completion problems. In addition, emergency police, fire and medical responders rely upon originating wireline telephone numbers to determine the exact locations to which assistance must be sent when every moment can be critical to life, health and safety. Moreover, large segments of the public have long used wireline telephone numbers to gauge whether the voice calls they are considering will be a free local calls or a long distance toll calls.

While limited number porting and technology changes have reduced the formerly ubiquitous geographic nature of wireline telephone numbers somewhat during recent years, the great majority of such wireline telephone numbers still are comprised of NPA and NXX codes that are associated with, and help to identify, geographic location. Moving to nationwide number portability for wireline telephone numbers consequently will have substantial economic

and operational impacts upon wireline carriers and first responders, as well as upon the calling public in general.

As the Commission is aware, the wireline voice service sector has been experiencing a migration of customers from legacy wireline Time Division Multiplexed ("TDM") voice services to wireline Voice over Internet Protocol ("VoIP") services during recent years. Some business and residential wireline VoIP services are nomadic, and are able to track locations and permit customers to originate and receive calls from multiple locations via Internet Protocol ("IP") technology without having to make substantial changes in hardware, software and billing systems.

WTA proposes that, if the Commission wishes to move forward with nationwide number portability at this time, it do so in discrete steps, with the first phases being to consider and (if warranted) develop, schedule and implement a full transition to wireless-to-wireless nationwide number portability. The wireless voice sector would appear to be the industry segment where nationwide number portability would offer the largest potential for competitive benefit and where existing network technologies can most readily accommodate nationwide portability. It is the understanding of WTA that most wireless networks are currently capable of tracking, finding and serving most wireless customers regardless of their telephone numbers and geographic locations.

Two very significant advantages of implementing wireless nationwide number portability before addressing wireline nationwide numbering portability are: (1) that it allows more time for the voluntary transition by customers from wireline TDM voice services to wireline VoIP services to proceed, which can significantly reduce the scope, difficulty and expense of the implementation by RLECs and other carriers of nationwide wireline number portability; and (2)

that the experience of implementing nationwide wireless number portability may help to discover and resolve nationwide portability problems common to both the wireless and wireline sectors, and perhaps help to reduce somewhat the already greater complexity and expense of nationwide wireline number portability design and implementation.

I
WTA – Advocates for Rural Broadband

WTA is a national trade association representing more than 340 rural telecommunications providers that offer voice, broadband, and video-related services in rural America. WTA members are predominately RLECs that serve some of the most rugged, remote and/or sparsely populated areas of the United States. The typical WTA member has 10-to-20 full-time employees and serves fewer than 3,500 access lines in the aggregate and fewer than 500 access lines per exchange. The primary service areas of WTA members are comprised of farming and ranching regions, isolated mountain and desert communities, and Native American reservations. They must construct, operate and maintain their networks under highly varied conditions of climate and terrain ranging from the deserts of Arizona to the lakes of Minnesota to the wilderness and villages of Alaska, and from the valleys of Oregon to the plains of Indiana to the hills of Tennessee and to the mountains of Wyoming. The major common features of these diverse rural areas are the much longer than average distances that must be traversed and the much higher per-customer costs of constructing, upgrading, operating and maintaining broadband networks than in urban and suburban America. WTA members are providers of last resort to many remote areas and communities that are both very difficult and very expensive to serve.

II
Notice of Proposed Rulemaking

WTA opposes elimination of the N-1 query requirement as premature prior to the time that the Commission fully considers the advantages and disadvantages of nationwide wireline number portability, and reaches decisions regarding whether, when and how to transition to it. Given that the Commission has previously forborne from the application to incumbent local exchange carriers ("ILECs") of all remaining equal access and dialing parity requirements for interexchange services (including those under Sections 251(g) and 251(b)(3) of the Communications Act),[1] WTA has no objection to the extension of similar forbearance to competitive local exchange carriers ("CLECs").[2] Finally, WTA supports the elimination of the current "grandfathering" condition allowing ILEC customers who were presubscribed to third-party long distance services at the time of the *2015 USTelecom Forbearance Order* to retain certain equal access and dialing parity services, as long as ILECs have a full set of options, including one to leave existing stand-alone toll service arrangements undisturbed.

A. WTA Opposes Premature Elimination of N-1 Query Requirement

To the best of WTA's information and belief, the current N-1 query requirement (which mandates that the carrier immediately preceding the terminating carrier be responsible for ensuring that the number portability database is queried) has been working efficiently and effectively with minimal disputes and complaints, and at acceptable costs. WTA's members have not reported significant problems or dissatisfactions with the N-1 process.

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[1] *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. §160(c) from Enforcement of Obsolete ILC Legacy Regulations That Inhibit Deployment of Next-Generation Networks et al.*, Memorandum Opinion and Order, 31 FCC Rcd 6157 (2015) (*"2015 USTelecom Forbearance Order").*

[2] WTA is an RLEC association, but notes that some of its RLEC members have CLEC affiliates.

It is not clear to WTA why the Commission would want to eliminate the N-1 query requirement before reaching the ultimate decision whether, when and how to adopt and implement nationwide number portability for wireline numbers. Rather than retaining a system that has been working to ensure that carriers know when a database has been queried and that has been distributing the costs of performing inquiries reasonably between interexchange and originating providers, elimination of the N-1 query requirement would appear to require all carriers to make database inquiries for most or all calls that they handle – in any event, for far more calls than they make such database queries today.

It is not clear at this time how large an increase in costs these additional database queries would impose upon WTA members and other ILECs. However, for RLECs, such added costs would come at very inopportune time when many are struggling to upgrade, maintain and operate their networks in the face of insufficient Universal Service Fund ("USF") support, including (for those remaining on the legacy Rate of Return Path) rapidly increasing budget control mechanism "haircuts."

Wireline callers can call wireless phone numbers today, and the wireless networks will generally find the called party regardless of telephone number and location as long as the called party has his or her wireless phone turned on. Hence, it appears that the N-1 query requirement does not impact location portability for wireless phone numbers, and that the primary need to address it will not occur unless and until the Commission mandates nationwide wireline number portability. Moreover, it appears that there are at least four alternative approaches to nationwide wireline number portability, and that some of these alternatives may not require elimination of the N-1 query requirement.

WTA consequently proposes that the Commission refrain from eliminating the N-1 query requirement at this time, and that it revisit the matter in the future if and when it determines to adopt nationwide wireline number portability and to implement it via a particular methodology that would be actually be impeded or adversely impacted by the existing N-1 query requirement.

B. WTA Supports Dialing Parity Proposals

WTA has no objection to the Commission forbearing from the application to CLECs of all remaining equal access and dialing parity requirements for interexchange services. WTA does not see such action as a premature movement toward nationwide wireline number portability. Rather, it is a matter of equity, and of competitive and technological neutrality. Given that the *2015 USTelecom Forbearance Order* granted forbearance from these requirements to ILECs, it appears reasonable that such forbearance be extended to CLECs.

WTA also supports elimination of the grandfathered status of customers who continue to be presubscribed to stand-alone long distance services. It believes that these grandfathered stand-alone toll customers are a declining segment of the voice industry. During the foreseeable future, WTA expects that most of the remaining grandfathered customers will terminate their service for a variety of natural or economic reasons, while the remaining stand-alone long distance toll carriers will continue to cut back on their rural operations and/or to convert to VoIP technology. WTA believes that the Commission can and should terminate the existing grandfathered classification without adversely impacting the remaining impacted customers, so long as it gives ILECs the flexibility to offer a full range of service options, including the marketing of bundles of their own local and long distance voice services and the ability to leave existing stand-alone toll arrangement undisturbed if customers refuse to change.

In sum, WTA supports the extension of dialing parity forbearance to CLECs, and the elimination of the grandfathered status of qualifying stand-alone long distance toll customers.

III
Notice of Inquiry

WTA believes that, if nationwide number portability is to be adopted and mandated, it should be implemented first for wireless numbers before being extended to wireline numbers.

Wireless networks appear already to have effective location tracking capabilities that allow wireless customers to make and receive calls as they roam throughout the United States and some other countries. Wireless carriers also appear to allow their customers to keep the same wireless telephone numbers as they move repeatedly among various communities and states throughout the country. Finally, wireless telephone numbers appear well on the way to becoming primarily personal telephone numbers that other entities dial to reach a specific individual wherever he or she may be located at the time and whether or not the call involves a long distance toll charge.

In stark contrast, wireline telephone numbers have long been assigned on a geographic basis and used by callers and called parties to estimate the general or specific location of the entity on the other end of the line. The traditional NPA-NXX-XXXX wireline telephone number has long permitted callers and first responders to determine the portion of the state in which the number and party are located (NPA code), the wireline central office serving the number (NXX code), and the specific household or business address served by the number (XXXX code).[3] Unlike wireless numbers, wireline numbers tend to be assigned to businesses, families and other

[3] In many rural areas, there are no specific street addresses. However, both telephone companies and local first responders can tell from wireline telephone numbers where customer homes or businesses are located.

multiple person households, and have remained associated predominately with particular geographic locations rather than particular individuals.

A. Likely Benefits and Costs of Nationwide Wireline Number Portability

WTA and its members are not aware of any perceptible demand by customers to keep their wireline telephone numbers when they move to distant locations. When a customer moves to a new home within the same ABC, Montana exchange, the customer generally wants to retain the same wireline telephone number and is virtually always able to do so. However, if a customer family is moving from their home in the ABC, Montana exchange to a new home in the XYZ, New Mexico exchange, WTA is aware of no requests or demands by such a customer to keep its Montana wireline telephone number at its new home in New Mexico.

WTA is also not aware of any competitive advantages or benefits to the Montana or New Mexico wireline carrier, whether it is a price cap or Rate-of-Return carrier, that would result from allowing the ABC, Montana exchange household customer to keep its Montana wireline number for use in the XYZ, New Mexico exchange. Given that wireline telephone numbers have long been associated with geographic locations, most customers expect to get a new wireline telephone number when they move to a new community or exchange, to a new area code or region of their state, or to a new state. In fact, for many customers, retaining their old wireline telephone number at a distant new location would raise concerns: (a) that their new neighbors would be reluctant to call them because their old number would appear to entail a long distance toll call; (b) that their former neighbors would get upset because calls to their new number would in fact entail long distance toll charges; and (c) that personal and business calls to them may not be completed due to the complexities and confusions of having a telephone number not commonly associated with their new geographic location. Given these uncertainties

and problems, and the overall absence of perceptible consumer demand to keep wireline telephone numbers when moving out of the areas with which they are associated, WTA sees no potential competitive benefit to the XYZ, New Mexico exchange carrier or the ABC, Montana local exchange carrier from allowing a former ABC, Montana exchange customer family to keep its Montana number at its new New Mexico address.

Decoupling wireline telephone numbers from their traditional geographic basis will require substantial changes in the call completion facilities and functions of RLECs and other wireline carriers, including switching, call routing and billing. WTA does not have a reliable estimate at this time of the costs likely to be incurred for a typical RLEC to implement nationwide wireline number portability, or of the nature, extent and duration of any call completion problems that may result. Some of these costs and problems will depend upon which of the four potential nationwide number portability models is adopted by the Commission. However, whatever the size of the additional costs imposed upon RLECs to modify their facilities and operating systems to implement nationwide wireline number portability and resolve any resulting call completion issues, they would come at a most inopportune time when RLECs are struggling to meet substantial broadband upgrade demands and build-out obligations with wholly insufficient USF support.

Police, fire and medical first responders that have long relied upon caller ID and geographic wireline telephone numbers to determine the exact locations to which assistance must be sent will also need to modify their systems. WTA expects that federal, state and local public safety agencies will step forward to analyze the changes that nationwide number portability would require them to make and to estimate the increased costs and risks thereof. Any Commission decision to adopt or not to adopt a particular nationwide number portability model

will need to assess the nature and size of the additional costs imposed upon public safety agencies, the accuracy and reliability of the callback and location information furnished under the new system, the maintenance of customer confidence that their 911 calls will be routed properly, and the likelihood and nature of potential delivery delays and mistakes for 911 calls when every moment can be critical to life, health and safety.

As noted above, large segments of the public have long used wireline telephone numbers to gauge whether a contemplated voice call will be a free local call or a long distance toll call. Regardless of how much consumer education and advertising takes place, there will be significant numbers of customers who will be unpleasantly surprised and inclined to file complaints when calls to ported numbers that appeared to be local calls result in unanticipated long distance toll charges or are blocked by toll limitation mechanisms.

WTA will be interested in the assessment of the benefits and costs of nationwide wireline number portability by organizations representing persons with disabilities. The wireline telephone numbers used for video relay service ("VRS") and Internet Protocol ("IP") relay services would appear to be more personal in nature than the typical wireline telephone number. This may render nationwide number portability more beneficial to some individuals with disabilities. However, like all consumers, persons with disabilities are subject to the confusions caused by the traditional association of wireline telephone numbers with geographic locations. After porting their numbers to distant locations, they will end up with local calls not being made to them because they looked like long distance calls, and with unexpected long distance tolls imposed on calls they make and on calls made to them.

Finally, as noted above, some of the costs and problems of nationwide wireline number portability are likely to be reduced or eliminated as more and more customers transition from

TDM voice services to VoIP services. In addition to nomadic VoIP services, VoIP technology appears to be more readily and less expensively able to provide location tracking and other call processing functions that may enable nationwide wireline number portability to be implemented in a less expensive and disruptive manner. WTA reiterates its proposal that the Commission implement nationwide wireless number portability first, and give the TDM-to-VoIP transition the opportunity to proceed further before addressing nationwide wireline number portability.

B. Alternative Approaches to Nationwide Number Portability

WTA does not believe that the alternative of commercial agreements is a feasible solution for nationwide wireline number portability. Whereas an agreement approach may work in the wireless industry where there is a limited number of underlying carriers (plus some resellers), it is not practicable in a wireline industry that encompasses over 1,000 ILECs and CLECs. WTA members have a great deal of familiarity and experience with the fact that the larger carriers are extremely reluctant to expend the time and resources to enter into interconnection, traffic exchange, number porting and other agreements with hundreds of smaller carriers where the traffic and dollars involved are not material to the operations or finances of the larger carriers. Consequently, WTA would strongly oppose a "commercial agreements" model for nationwide wireline number portability.

WTA is also skeptical of the GR-2982-CORE model that calls for dividing the country into small, non-overlapping blocks called Geographic Unit Building Blocks ("GUBBs") that would serve as the vehicle for switches to identify the geographic location of the end user receiving the call and for carrier selection and rating purposes. WTA wonders why the Commission would want the industry to undertake the substantial effort and expense necessary

to divide the country into GUBBs; to re-program or otherwise modify switching, call routing and billing systems of most or all carriers; and to train both carrier employees and consumers to use the new GUBB system when the existing NPA-NXX-XXXX numbering system with which the industry and consumers are familiar already performs substantially similar geographic location identification, routing and billing functions? WTA opposes the GR-2982-CORE model as a complex and expensive change that does not appear to significantly improve the tested and familiar NPA-NXX-XXXX system.

WTA finds the Non-Geographic Location Routing Number ("NGLRN") alternative to be interesting. It appears to allow nationwide numbers to be identified readily due to their assignment to specified non-geographic area codes, and for calls to such numbers to be routed to and through a non-geographic gateway residing on an IP network. The NGLRN option appears to support the creation of non-geographic telephone numbers, to support both wireline and wireless nationwide number portability, and to allow many existing call processes to continue working. A disadvantage of NGLRN is that it appears to require the scrapping of the N-1 query requirements, and to force substantial increases in database queries even though only one or a few new non-geographic area codes are involved. WTA also notes that it appears that a NGLRN alternative would be prospective only, and that it would not enable customers to keep their existing telephone numbers after moving to distant locations. Rather, it appears that customers would have to obtain a non-geographic telephone number first, and only thereafter be able to move from location to location while retaining their non-geographic telephone number wherever they might reside.

The National Local Routing Number option is the full-fledged nationwide number portability option. It is subject to all of the switching, call routing, call completion and billing

modification issues and costs, first responder challenges, accessibility questions and customer confusion discussed above. Conversion to a National Local Routing Number system constitutes a major and expensive network change, especially for the declining legacy TDM voice network. That is why WTA has urged that nationwide number portability be implemented first for the wireless sector that has developed effective location tracking capabilities and where existing telephone numbers are becoming increasingly personal and non-geographic in nature. Given that VoIP services appear far more adaptable to location portability than TDM services, WTA urges the Commission to allow the TDM-to-VoIP transition to proceed as far as possible before addressing nationwide wireline number portability and to minimize as much as possible the location portability costs imposed upon TDM voice networks and services that are going the way of the telegraph.

IV
Conclusion

If the Commission wishes to move forward with nationwide number portability at this time, WTA proposes that it do so in discrete steps, starting with the wireless sector that has developed effective location tracking processes, and that uses telephone numbers that have become increasingly personal and non-geographic in nature. WTA recommends that the Commission wait to address nationwide wireline number portability until it has completed its resolution of the foreseen and unforeseen problems of implementing nationwide wireless portability and until the ongoing transition from TDM to more portability-compatible VoIP services proceeds further.

WTA opposes elimination of the existing N-1 query requirement unless and until the Commission fully considers the benefits and costs of nationwide wireline number portability,

determines to mandate it, and selects a method that requires elimination of the N-1 query rule. WTA does not oppose the equitable extension to CLECs of forbearance from the application of all remaining equal access and dialing parity requirements for interexchange services, or the elimination of the grandfathered exceptions from dialing parity forbearance impacts for qualifying customers who continue to be presubscribed to stand-alone long distance services.

WTA believes that the costs and benefits of the National Local Routing Number option, the full-fledged nationwide number portability option, need to be studied carefully, particularly before proceeding with wireline portability. Wireline telephone numbers have long been associated predominately with specific geographic areas and locations, and commonly used by a variety of entities to estimate general and/or precise locations for various purposes. Moving from today's service provider portability to nationwide location portability will require RLECs and other wireline carriers to make substantial and expensive changes in call completion facilities and functions, including switching, call routing and billing, at a time when they are struggling to meet broadband demand and build-out requirements with insufficient (and in many cases, unpredictable) USF support. In addition, emergency police, fire and medical responders have long relied upon originating wireline telephone numbers to determine the exact locations to which assistance must be sent when every moment can be critically important. Finally, large segments of the public have long used wireline telephone numbers to estimate whether the voice call they are considering will be a free local call or a long distance toll call.

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changed their existing number to a non-geographic number in the new non-geographic area code(s) established for nationwide portability purposes.

Finally, WTA opposes the "commercial agreements" option due to the historic difficulty encountered by RLECs in negotiating and obtaining agreements with large carriers, and the GR-2982-CORE option because it appears to be a complex and expensive undertaking that does not significantly improve upon the location identification and call routing capabilities of the tested and familiar NPA-NXX-XXX system.

Respectfully submitted,
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Dated: December 27, 2017