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Hon. Herbert H. Hilliard, Chairman
c/o Ectory Lawless, Docket Room Manager
Tennessee Public Utility Commission
502 Deaderick Street, 4th Floor
Nashville, TN 37243
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RE: *Petition of the North American Numbering Plan Administrator on Behalf of the Tennessee Telecommunications Industry for Relief of the 423 Numbering Plan Area, TPUC Docket No. 22-00128*

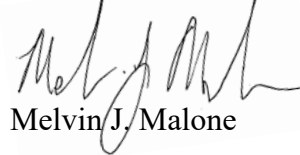
Dear Chairman Hilliard:

Attached for filing please find the *Comments of the Joint Telecommunication Carriers* in response to the Tennessee Public Utility Commission's Notice dated March 30, 2023, in the above-captioned docket.

As required, the original plus four (4) hard copies will follow. Should you have any questions concerning this filing, or require additional information, please do not hesitate to contact me.

Very truly yours,

BUTLER SNOW LLP



Melvin J. Malone

clw

Attachment

cc: Parties of Record
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BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION

NASHVILLE, TENNESSEE

In re: Petition of the North American)
Numbering Plan Administrator on Behalf)
of the Tennessee Telecommunications)
Industry for Relief of the 423 Numbering)
Plan Area)

Docket No. 22-00128

COMMENTS OF THE JOINT TELECOMMUNICATIONS CARRIERS

The Joint Telecommunications Carriers,¹ representing a coalition of incumbent wireline providers, competitive local exchange carriers, and wireless carriers (the “Carriers”), submit the following comments in response to the Notice of Open Docket for Filing Comments, issued by the Tennessee Public Utility Commission (the “Commission”) on March 30, 2023. For the reasons set forth below, the Carriers respectfully submit that the Commission should approve the Petition of the North American Numbering Plan Administrator (“NANPA”), which recommends an all-services distributed overlay and a 13-month implementation schedule to provide relief for the 423 area code or Numbering Plan Area (“NPA”).

Overview

NANPA filed the Petition in this docket on behalf of the Tennessee telecommunications industry on November 18, 2022, notifying the Commission of the need for relief in the 423 NPA. In the Petition,

¹ The telecommunications carriers collectively referred to herein as the “Joint Telecommunications Carriers” are: AT&T Corp., Teleport Communications America, LLC, New Cingular Wireless PCS, LLC, BellSouth Long Distance, Inc., and Bellsouth Telecommunications LLC d/b/a AT&T Tennessee (collectively “AT&T”); CenturyLink Communications, LLC, Global Crossing Local Services, Inc., Level 3 Communications, LLC, Level 3 Telecom of Tennessee, LLC, TelCove Operations, LLC, and WiTel Communications, LLC (collectively “Lumen”); T-Mobile South, LLC, Powertel/Memphis, Inc., MetroPCS Georgia LLC, and Sprint Spectrum LLC (collectively “T-Mobile”); and MCI Communications Services LLC d/b/a Verizon Business Services, MCI metro Access Transmission Services LLC d/b/a Verizon Access Transmission Services, Verizon Long Distance LLC, Verizon Select Services Inc., XO Communications Services, Inc. and Cellco Partnership and its commercial mobile radio service provider affiliates operating in the state of Tennessee (collectively “Verizon”).

NANPA states that the 423 NPA is projected to exhaust during the third quarter of 2025² if relief is not granted. The Carriers support NANPA's Petition and urge the Commission to adopt its recommendation to implement an all-services distributed overlay based upon a 13-month implementation schedule.

Discussion

I. An All-Services Overlay Is the Most Equitable Approach to Area Code Relief for the 423 NPA

The Commission's two options for area code relief in the 423 NPA are an all-services overlay or a geographic area code split. The Carriers strongly support the Petition's recommendation for an overlay. The implementation of an all-services overlay will significantly minimize inconvenience to consumers and facilitate carrier efficiency, consistent with the trend throughout the United States of using the overlay method as the preferred form of area code relief.

An all-services overlay has numerous advantages over an area code split, including less customer impact and fewer technical issues. As seen in the recent implementation of overlays in numerous states across the nation, including Tennessee's 615/629 NPA overlay implemented in 2015, all-services overlays are the least disruptive for consumers and can be effectively and efficiently implemented by carriers. As a result, all-services overlays are the overwhelmingly preferred form of area code relief across United States and throughout the North American Numbering Plan.³

Over the last decade, the industry has become adept at implementing mandatory 10-digit dialing and all-services overlays.⁴ Concerns that an all-services overlay, 10-digit dialing, or two area codes serving the same region would confuse customers have not materialized where overlays have been

² NANPA's latest exhaust projection, released October 21, 2022, projects exhaust of the 425 NPA in the third quarter of 2025. See https://www.nationalnanpa.com/reports/2022-2_NPA_Exhaust_Projections_Final.pdf.

³ In the United States, overlays have been implemented in 33 states (including the District of Columbia) and another 14 overlays are scheduled to be implemented. See NANPA's *NPA's Planned But Not Yet In Service* report, available at <https://www.nationalnanpa.com/enas/plannedNpasNotInServiceReport.do>.

⁴ More than 50 overlays have been implemented in the United States in the last 10 years. See NANPA's *Area Codes Introduced Over The Past Ten Years* report, available at <https://www.nationalnanpa.com/enas/npasOverLast10YearsReport.do>. In contrast, no split has been implemented since 2007.

implemented. Indeed, mandatory 10-digit dialing (or 1+10-digit dialing) is now the most prevalent dialing plan across the United States, implemented in nearly 82% of the 346 NPAs in service across 47 states (including the District of Columbia),⁵ and including the 615, 629, 731 and 865 NPAs in Tennessee.⁶

II. An All-Services Overlay Does Not Create “Winners” and “Losers”

Unlike an all-services overlay, an area code split would not treat consumers who have a 423 telephone number today in an equitable manner. A split would force customers whose numbers are on the “losing” side of the new NPA boundary to change the area code of their 10-digit phone number, thus requiring them to provide the new area code to their family, friends, schools, health care providers, financial institutions, and any and all other businesses that use the phone number to contact them or provide an extra layer of security for accessing online accounts through two-factor authentication via a phone call or text message. An area code split also would impose unnecessary financial burdens on business owners and operators whose numbers are on the “losing” side by requiring them to update their company stationery, business cards, texting information, Internet-related sites, including social media, and advertisements – in addition to contacting existing customers to inform them of a new business phone number. The same costs would be imposed on state and local governments whose numbers are on the “losing” side. In addition, any affected N11 abbreviated dialing arrangements (e.g., 211 or 311) for government or community organizations would have to be updated if those entities’ local termination numbers were assigned a new area code.

There are numerous non-telephony databases, retail reward programs, pharmacies, national missing children databases, and others that would need to be updated with a new telephone number if

⁵ See the NPA Dialing Plans report, available on the NANPA website at <https://www.nationalnanpa.com/enas/npaDialingPlansReport.do>.

⁶ Tennessee’s 615/629 overlay was implemented on March 28, 2015. Mandatory 10-digit dialing was implemented in 82 NPAs, including Tennessee’s 731 and 865 NPAs, due to the implementation of the “988” abbreviated dialing code to reach the National 988 Suicide & Crisis Lifeline. See <https://www.fcc.gov/988-suicide-and-crisis-lifeline>.

an area code split were chosen. Consumers and businesses alike have become increasingly attached to and are identified by their telephone numbers. An area code split would be significantly more burdensome on businesses and consumers in 2025 than it was 16 years ago, in 2007, when the last split in the US was implemented.⁷ Indeed, the Commission correctly decided 10 years ago, in 2013, that an overlay solution should be adopted for the 615 NPA.⁸ The Commission should adopt an overlay for relief of the 423 NPA as well.

III. An All-Services Overlay Can Be Implemented Easily and Adapted to by Consumers

When overlays were first introduced more than two decades ago, some state commissions and consumers expressed concern for the burden and inconvenience of 10-digit dialing on calls within the same area code. Today, however, the possibility of a telephone number change and the resulting burdens and costs associated with the change far outweigh the burden of 10-digit dialing for most customers. The last 15 years of overlay implementation experience shows that consumers easily adapt to making “local” calls between and within area codes, and to dialing 10 digits as part of their routine calling patterns. Consumers may have a work number using one area code, have a home phone number in a different area code, and have friends and family in numerous others. And the widespread adoption of wireless smartphones as the consumer’s primary phone, as well as the proliferation of sophisticated cordless phones in homes or phone systems in businesses, means that “dialing” for many consumers consists of highlighting a contact and choosing the desired number, rather than inputting 10 digits on a keypad. Thus, any concern that 10-digit dialing will be a burden for consumers when an overlay to the 423 NPA is implemented will have even less validity going forward.⁹

⁷ The Public Service Commission of West Virginia issued an order implementing a geographic split of the 304 NPA in 2008, but on reconsideration rescinded the order and directed that an all-services overlay be implemented. See WV PSC Case No. 00-0953-T-PC, In re Petition for approval of a relief plan for the 304 Numbering Plan Area, Commission Order (Feb. 13, 2008).

⁸ *Petition of NANPA*, Order, Docket No. 11-00018 (Oct. 23, 2013) (“The panel found that the all-services distributed overlay, where existing customers would retain the 615 NPA and their current seven-digit telephone number, would have the least disruption to consumers and Industry alike”).

⁹ Once 10-digit dialing becomes the accepted practice in an area, future area code exhaust situations are resolved easily by simply

IV. An Overlay Avoids Certain Local Number Portability and Other Technical Implementation Problems Associated with a Split

Another benefit of an overlay versus a geographic split is that implementation of an overlay avoids technical problems carriers have experienced in complying with customers' local number portability ("LNP") requests. That is because there are significant technical challenges to complying with LNP requirements during the permissive dialing period of an area code split. Under relevant federal rules, the Number Portability Administration Center ("NPAC") houses all of the ported and pooled number data. During the night on which permissive dialing is implemented, NPAC personnel must update the NPAC database to include both the old and the new NPA. On the same night, all carriers operating in the NPA must update their operational support systems with the new and old NPA so that port requests will complete within the designated porting intervals. Port requests can fail or create a backlog if the carriers' operational support systems are not in sync with the NPAC's database. If such coordination fails, calls also can be misrouted or denied, leading to consumer dissatisfaction and undermining the unquestionable competitive and consumer benefits of LNP. Also, when implementing a split, all carriers, nationwide, on the night that permissive dialing is implemented, must activate the new NPA for calls to complete to both the old NPA and the new NPA. While the Carriers make every effort to make the transition a smooth one, these challenges can be avoided altogether with an overlay.

Most carriers have various administrative numbers in their networks that can be affected by a split. For example, location routing numbers ("LRNs") in a network are used to support call routing to ported or pooled numbers. If LRNs are in central office codes where area codes have changed, then carriers have to take great care in changing those numbers during the permissive dialing period of the split to avoid negatively impacting call completion for those customers.

adding another area code overlay into the mix. In contrast, the negative consequences of splitting an area code will recur in the future, potentially requiring some percentage of the same consumers and business customers (*i.e.*, those who had to change their area code) to incur the **same** costs and headaches to resolve the next number exhaust situation affecting the same area.

Carriers have to do extensive testing before the start of permissive dialing and again before mandatory dialing in a split to ensure that changing the area code of any administrative number in the network will not negatively impact a customer's ability to receive calls. There are no such concerns with an overlay because none of the existing administrative numbers would need to change. Moreover, with a split, the SMS/800 Toll Free Number Registry, which houses all of the underlying 10-digit geographic routing numbers for toll free numbers, would need to be changed for all affected numbers.

Further, many carriers, including the Carriers, have implemented next-generation network routing technologies such as Voice over Internet Protocol ("VoIP"). These technologies would require significant and costly operational developments to accommodate an NPA split versus an overlay solution because the VoIP call-routing platforms are centralized on a national basis rather than a local switching basis as with the traditional Time Division Multiplexing network. Plus, many VoIP providers have entered the telecommunications market after the last area code split was implemented 15 years ago. Thus, it is likely an area code split could be considerably more challenging for the industry in 2025 simply due to the inexperience in implementing a split for many carriers.

Finally, there are a number of other technical implementation problems that can arise for wireless customers when an area code split is implemented. These include, but are not limited to:

Caller ID Customer Confusion – During the permissive dialing period, the called party's Caller ID device or handset may indicate that a received call originates from a number with the new area code even though the caller is still using a number in the old area code. Although this issue does not technically affect the ability of the call to complete, it can lead to confusion on the called party's part. The called party may choose not to answer the call because the indicated originating number or the new area code is not recognized, or the stored contact list in the called party's device or handset has not been updated. There is no such problem with an overlay because no customer is forced to change his or her number.

Text and Multi-Media Messaging Completion – Some wireless systems are able to handle only one 10-digit telephone number for text and multi-media (*e.g.*, picture) messaging. Therefore, if during the permissive dialing period the calling party inputs a different 10-digit number (*i.e.*, using the new area code) than the one which is in

the called party's wireless provider's system (*i.e.*, the old area code number), the message will fail and not be delivered.

Smartphone Application Impacts – With the proliferation of smartphones, wireless customers have the ability to add various types of third-party applications to their phones. These applications, which can run into the hundreds or even thousands depending upon the smartphone's storage capacity, often perform various user authentications (e.g., two-factor authentication) via a text message sent to the customer's existing 10-digit number. As a result, changing a customer's area code in a split would likely impact the customer's ability to receive such text messages, and the operation of many of these advanced data applications. At the very least, a split would require a customer to update his or her number in his or her user profile in each application that uses the customer's number as an identifier or authentication criterion.

Wireless Phone Reprogramming Issues – When implementing a split, most wireless providers will change the area code of affected customers' phones over the air, if the handset is over-the-air capable, to avoid manually reprogramming each handset. But when military personnel or other customers living or traveling abroad whose phones are outside the range of over-the-air reprogramming, these customers' new area code will not get timely programmed before mandatory dialing begins. As a result, they will not be able to receive calls because the 10-digit number in their phones with the old area code will not match the new area code number that is in the service provider's customer record.

V. The Carriers Support a 13-Month Implementation Schedule for the Overlay

In its Petition, NANPA recommends a 13-month schedule for implementation of an all-services overlay during which a transition from 7-digit to 10-digit local dialing will occur.¹⁰ Under the proposed schedule, the first six months are dedicated to network preparation and customer education, followed by six months of permissive 7- or 10-digit dialing and continued customer education. Mandatory 10-digit dialing would begin at the end of the permissive dialing period. The first central office code activation from the new NPA would become effective after one month of mandatory 10-digit dialing.¹¹

After the Commission issues an Order approving the all-services overlay, NANPA would host the initial implementation meeting with the industry to determine the specific dates for the 13-month

¹⁰ Implementation of any area code split would take significantly longer than 13 months due to all the technical challenges described above.

¹¹ To ensure numbering resources are used most efficiently, NANPA will not assign central office codes from the new NPA until all assignable central office codes from the 423 NPA have been assigned.

implementation schedule. The industry would ensure that key dates do not coincide with key dates of other overlay implementations occurring across the country or significant holidays, such as Mother's Day, where call volumes may spike. Based on the industry's experience with overlay implementations across the country, this flexibility and the 13-month period should provide adequate time for network preparation and customer education, leading to a smooth implementation of the overlay and avoiding the denial or delay of service to customers due to the unavailability of new central office codes.

Conclusion

An all-services overlay for relief of the 423 NPA will provide many more advantages than any geographic split option. An all-services overlay eliminates the need for the Commission to pick the "winning" side of the split that would retain the 423 area code, treats all customers who have a 423 telephone number in an equitable manner, and significantly minimizes inconvenience to consumers and businesses. For the reasons set forth above, the Carriers urge the Commission to approve an all-services overlay for relief of the 423 NPA and a 13-month implementation schedule, no later than September 30, 2023.¹²

Dated: April 21, 2023

Respectfully submitted,



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On behalf of Verizon and the following:

¹² To ensure that relief is implemented six months prior to the projected exhaust of the 423 NPA, a decision by September 30, 2023 will provide the necessary time needed for NANPA to complete its tasks, for the industry to determine implementation dates, and then for the industry to complete the 13-month implementation.



w/permission

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