**MINNESOTA PUBLIC UTILITIES COMMISSION**

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| **In the Matter of a Relief Plan For the Exhaust of the 507 Numbering Plan Area** | **)** **)** **)** | **Docket No. P999/M-22-461** |

# COMMENTS OF THE JOINT TELECOMMUNICATION 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 Public Hearing and Comment Period, issued by the Public Utilities Commission (the "Commission") on October 5, 2022. For the reasons set forth below, the Carriers respectfully submit that the Commission should approve the industry's consensus recommendation for an all-services distributed overlay to provide long-term numbering relief for the 507 area code or Numbering Plan Area ("NPA").

## Background

The Commission instituted this proceeding in response to an August 23, 2022 petition from the North American Numbering Plan Administrator ("NANPA"), on behalf of the Minnesota telecommunications industry, for approval of an all-services distributed overlay for the 507 NPA, which has a projected exhaust date of first quarter 2025.[2] The

[1] The telecommunications carriers collectively referred to herein as the "Joint Telecommunications Carriers" are: Cingular Wireless, Teleport Communications Group, Inc., AT&T – Local, New Cingular Wireless PCS, LLC, and Teleport Communications America, LLC (collectively "AT&T"); Citizens Telecommunications Company of Minnesota, LLC, and Frontier Communications of Minnesota, Inc. (collectively "Frontier"); CenturyTel of Chester, Inc. d/b/a CenturyLink, CenturyTel of Minnesota, Inc. d/b/a CenturyLink, Embarq Minnesota, Inc. d/b/a CenturyLink, CenturyLink Communications, LLC, Level 3 Communications, LLC, and Qwest Corporation (collectively "Lumen"); Sprint Spectrum, L.P., MetroPCS, Inc., and Aerial Communications, Inc. (collectively "T-Mobile"); and Cellco Partnership d/b/a Verizon Wireless, and MCImetro Access Transmission Services LLC (collectively "Verizon").

[2] At the time that NANPA filed its petition, exhaust was projected in the first quarter of 2025. NANPA's latest projection, released October 21, 2022, continues to project exhaust in the first quarter of 2025. See https://www.nationalnanpa.com/reports/2022-2_NPA_Exhaust_Projections_Final.pdf.

Carriers urge the Commission to adopt the industry consensus recommendations for the all-services distributed overlay and 13-month implementation schedule.

## Discussion

### I. The All-Services Overlay Is the Most Equitable Approach to Area Code Relief for the 507 NPA

The Commission's two choices for area code relief in the 507 NPA are an all-services overlay or a geographic area code split. The Carriers strongly support the industry consensus recommendation for an all-services overlay. The implementation of the all-services overlay will significantly minimize inconvenience to consumers and support the continuing trend throughout the United States to use 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, 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 ("NANP"),[3] and the industry is quite experienced in implementing all-services overlays.[4] Any past concerns that an all-services overlay, 10-digit dialing, or two area codes serving the same region would confuse customers have not materialized in jurisdictions where overlays have been

[3] In the United States, overlays have been implemented in 33 states (including the District of Columbia) and another 17 overlays are scheduled to be implemented in the next two years. See NANPA's *NPAs 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.

successfully implemented. Indeed, mandatory 10-digit dialing (or 1+10-digit dialing) is now the most prevalent dialing plan across the United States, implemented in more than 81% of the 341 NPAs in service across 47 states (including the District of Columbia),[5] and including the 218 and 952 NPAs in Minnesota.[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 507 telephone number today in an equitable manner. A split would force customers 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, 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 would place potentially onerous financial burdens on business owners and operators in the affected area 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. Further, 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 an area code split were chosen. Consumers and businesses alike have become increasingly attached to and are identified by their telephone numbers, and any area code split would be significantly more burdensome now than it was 15 years ago

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

[6] Mandatory 10-digit dialing was implemented in 82 NPAs, including Minnesota's 218 and 952 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.

when the last split in the US was implemented (and nearly 23 years ago when the last split in Minnesota was implemented).

## III. An All-Services Overlay Can Be Easily Implemented 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 often work in one area code, live in another, and have friends and family in numerous others. In addition, the widespread use of wireless smartphones as the consumer's primary phone, as well as the proliferation of sophisticated cordless phones in homes, 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, the concern that 10-digit dialing will be a burden for consumers when an overlay to the 507 NPA is implemented will have even less validity going forward.[7]

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

An additional benefit of an overlay versus a geographic split is that implementation of an overlay avoids technical problems carriers have experienced in complying with

[7] Further, once 10-digit dialing becomes the accepted practice in an area, future area code exhaust situations are easily resolved by simply 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.

customers' local number portability ("LNP") requests. Specifically, 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 can also 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 in order for calls to complete to both the 507 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.

In addition, most carriers have various administrative numbers in their networks, and those numbers can be affected by a split as well. 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. 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. Additionally, the SMS/800 Toll Free Number database, which houses all of the underlying 10-digit geographic routing numbers for toll free numbers, would need to be changed for all numbers affected by an area code split.

Further, many carriers, including these 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 ("TDM") network.

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.
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> **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 will require a customer to update his/her number in his/her user profile in each application that uses the customer's number as an identifier or authentication criterion.[8]

**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

In its August 2022 Petition, NANPA outlined a 13-month schedule for implementation of the recommended all-services overlay. Under that schedule, the first six months are dedicated to network preparation and customer education, and then 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.

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

[8] Customers may not immediately know which applications use their phone numbers so some updates could be inadvertently missed, and the impact of missing those updates can be significant. For example, see https://www.latimes.com/business/la-fi-tn-phone-number-security-20161125-story.html.

dates for the 13-month 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 507 area code 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 507 area code, treats all customers who have a 507 telephone number in an equitable manner, significantly minimizes inconvenience to consumers and businesses, and provides a long period of relief. For the reasons set forth above, the Carriers urge the Commission to approve the industry's consensus recommendations for an all-services overlay for the existing 507 area code and the 13-month implementation schedule no later than May 31, 2023.

Respectfully submitted,

*/s/ Carey Gagnon*

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