

concluded that implementing ITN pooling would even generate any benefits. Third, given the recent state of the technique, even if it was determined that ITN pooling would be a useful optimization measure, it is not known whether the cost to implement ITN pooling would be so high as to be unjustified.

The Commission is particularly mindful of the problems associated with unassigned number porting and requests comment on the impact of these issues.⁶⁵ The Commission's caution with respect to this technique is wise. The industry is just now studying UNP to determine if this concept is justifiable, implementable, and useful. There are many issues in addition to those raised by the Commission that need to be addressed before pursuing the concept of porting numbers from one service provider's inventory to another service provider can be seriously considered.

Also, the UNP technique is totally dependent on yet to be developed UNP assignment guidelines. GTE recommends that industry efforts would be more productively spent in making sure that the circumstances leading to "insufficient numbers available for assignment for a specific customer request for service on a rate center basis" should never occur.⁶⁶ Diverting those resources and allocating them with a technique like interim UNP does little to solve a jeopardy situation.

⁶⁵ *NPRM*, ¶ 142. In particular, the Commission notes that porting large blocks of unassigned numbers could create problems with routing calls and disrupt calls to E911 systems. *NPRM*, ¶ 142.

⁶⁶ *See NANC Report* at 136.

3. Thousand-block pooling: implementation issues

The FCC also requests comment on whether the deployment schedule for thousand-block pooling would best begin with the 100 largest MSAs.⁶⁷ The Commission's tentative conclusion to restrict the initial deployment of thousand-block pooling to the top 100 MSAs appears to be a reasonable approach. GTE would add that thousand-block pooling should not be mandatory. Deployment of thousand-block pooling should not ignore the fact that, where other number saving approaches have been implemented, such as RCC, there may be no immediate need to implement pooling to ensure carriers have sufficient numbering resources. Even within the top 100 MSAs, there could be some MSA for which pooling is not necessary or cost justified at this time.

The Commission should not mandate LNP technology merely to accommodate pooling, thousand-block or otherwise. From a public interest perspective, there are significant rural areas around the country that face no threat of number depletion and thus no need for number pooling or other related steps. Yet, if the Commission were to impose LNP requirements merely to prepare for the possibility of pooling, it would impose significant costs on these carriers—many of whom are rural carriers already facing significant regulatory and operational costs—without any apparent benefit for number conservation goals. Whatever the independent merits of imposing LNP

⁶⁷ *NPRM*, ¶ 144.

requirements on carriers, there is no record supporting imposition of LNP mandates as a means of accommodating number pooling.

To implement the different pooling solutions, the Commission asks for comment on the question of “what entity should be tasked with making the decision whether to implement pooling in a given area.”⁶⁸ Prior to addressing this question, it is more appropriate that the FCC provide more guidance concerning what criteria is to be considered in deploying pooling. For its part, GTE echoes its earlier suggestion that one criteria be that the adopted pooling method should at least extend the life of an area code by five years from the time pooling is implemented.⁶⁹ The states should be responsible for holding hearings to gather information from LNP-capable carriers to assess whether pooling is cost beneficial for deployment and establish an implementation schedule for a specific NPA.

The Commission also seeks comment on the suggestion that the implementation of thousand-block pooling be tied to the number of NXXs that remain in an NPA or the expected number of thousand-blocks to be returned to the NPA under a pooling plan. It is only natural that one of the determinants for the benefit of pooling is the number of vacant NXX codes or vacant NXX-X codes available for the pool. After all, if the number is small, little is to be gained from pooling. In addition to looking at the raw

⁶⁸ *NPRM*, ¶ 146.

⁶⁹ Since pooling and utilization is driven not only by the number of carriers but also the number of rate centers within an NPA, both factors should be considered to determine whether pooling will show a benefit.

numbers, any determination on thousand-block pooling needs to take into consideration the forecast of usage for each carrier. For instance, if each carrier forecasts that it will need 10,000 numbers in a large rate center, thousand-block pooling will provide little benefit. On the other hand, if the forecast for numbers is small but the number of rate centers is large, then pooling should provide benefit.

In conjunction with considering the number of NXX codes that are available, the Commission requests comment on whether opting in or out of thousand-block pooling should be tied with an ongoing or planned effort to engage in RCC in an NPA.⁷⁰ Of particular significance, if the rate center is large enough, each carrier may be able to utilize fully and request complete NXX codes. In this case, the use of RCC eliminates the requirement to pool. Pooling only provides benefits when the number of rate centers is high or the number of carriers is high or both. A calculation, which looks at the product of carriers and rate centers, could be used as a method to identify the point at which RCC has effectively eliminated the need to implement pooling because the benefits of pooling are so minimal as to not justify any costs.

The Commission also seeks comment on whether the decision to implement thousand-block pooling should be based on detailed studies of specific NPAs and asks who should perform those studies.⁷¹ GTE agrees that studies should be done on an NPA basis. These studies should be conducted either by state commissions or an

⁷⁰ *NPRM*, ¶ 151.

⁷¹ *NPRM*, ¶ 152.

independent third-party, but they need to be undertaken on a consistent basis pursuant to national standards. The NANPA, however, probably should **not** be the entity to perform the studies because of the potential conflict of interest. If the NANPA is delegated to conduct the relevant study and is also selected as the pooling administrator, the NANPA would benefit from a decision to implement pooling.

Finally, the Commission requests comment on determining what the relevant geographic area should be for the implementation of a nationwide thousand-block pooling methodology.⁷² For technical reasons, thousand-block pooling will need to be administered on a rate center basis. For simplicity, however, the implementation of thousand-block pooling should take place on an NPA basis. While the top 100 MSAs represent a good place to start, there may be instances where sufficient RCC has taken place to preclude the need for pooling. As discussed previously, one of the incentives for implementing RCC would be the ability of carriers to opt out of pooling. Moreover, an NPA-based implementation policy would allow certain rate centers within the NPA to avoid the costs of pooling if there is no active competition.

4. Implementation time frame

The Commission observes that the *NANC Report* estimates that thousand-block pooling could be implemented within 10 to 19 months after the agency has issued an order and seeks comment on that estimated timeline.⁷³ GTE agrees with the timeline

⁷² *NPRM*, ¶ 154.

⁷³ *NPRM*, ¶ 158.

developed in the *NANC Report* with the exception of the time to upgrade the Numbering Portability Administration Center (“NPAC”). The ongoing discussions between Lockheed Martin and the regional number portability administrators concerning the upgrade to the NPAC for pooling indicate that it will take up to 62 weeks to deliver the revised software for industry testing, with that testing anticipated to take another 12 to 15 weeks. While one of the number portability administrators has requested a reduced functionality capability and a shorter timeline from Lockheed Martin, a formal response on the impact of this analysis has not been received. Thus, without an order from the FCC, some members of the industry are reluctant to continue the development on the NPAC or individual company operating systems.

In order to speed deployment, the Commission should not look to the existing version of the NPAC software (release 1.4) nor even allow its exportation for use in any further mandatory pooling trials or deployments. Despite the fact that release 1.4 has been used in the Illinois thousand-block pooling trial, it lacks the necessary systems and processes found in NPAC release 3.0 that will make thousand-block pooling an automated, scalable, and robust solution for a national architecture. Unlike release 1.4, NPAC 3.0 has a capability called Efficient Data Representation (“EDR”). EDR minimizes data storage capacity and transmission requirements, and thus it can support a more cost-effective implementation of pooling. Without adequate EDR support, an individual company runs the risk of exhausting its database that contains not only its pooled numbers but also ported numbers related to LNP. Since some companies have regional databases and some have national databases, the adverse capacity impact

would transcend the immediate pooling area and jeopardize the company's ability to port numbers.

In the end, use of release 1.4 represents a "quick-fix" approach to the numbering problem. Its continued deployment does not present a long-term solution. Rather, its use would result in the needless deployment of systems and processes to support pooling that would be obsolete upon implementation. Therefore, the Commission must not begin implementation before the NPAC software is fully upgraded and should not allow release 1.4 to be used in any additional pooling trials or deployments.

5. Non-LNP-capable carriers will not be able to participate in pooling programs

Not all carriers, particularly CMRS carriers, are required to have the capability to port local numbers at the same time, if at all.⁷⁴ The Commission believes that once CMRS carriers are capable of porting numbers, they should be subject to any existing wireline pooling requirements.⁷⁵ GTE disagrees. Wireless carriers should not be covered under the same requirements imposed on wireline carriers because the way in which CMRS carriers receive and use numbers is fundamentally different from the wireline industry. The CMRS industry is very dynamic—demand continues to rise and

⁷⁴ Paging companies will not be required to implement LNP at any time. See CTIA's Petition for Forbearance from Commercial Mobile Radio Service Number Portability Obligations, WT Docket No. 98-229, CC Docket No. 95-116, *Memorandum Opinion and Order*, FCC 99-19 (rel. Feb. 9, 1999).

⁷⁵ *NPRM*, ¶ 161.

the industry continues to experience a 30 percent annual churn rate.⁷⁶ In addition, wireless thousand-block pooling would not contribute to numbering conservation in the same manner as wireline thousand-block pooling because wireless services are not bound by rate centers and take numbers from fewer rate centers than wireline carriers. These facts taken together mean that it is unlikely that CMRS providers can participate effectively in the return of unused and poolable numbers.

The Commission seeks to examine the benefits, or lack thereof, of requiring LNP-capable CMRS carriers' participation in thousand-block pooling.⁷⁷ GTE notes several problems with the NANPA exhaust projections with respect to CMRS carriers, including: (1) it was based on only approximately 60 percent carrier participation in COCUS reporting; (2) it did not look at churn and aging; and (3) it lacks information on the types of carriers. Additionally, the reporting required under the COCUS caused carriers to understate their actual utilization rates due to the duplicate counting of Transitional Office Codes. This flaw has a significant effect on the count of utilized numbers. In addition, it is important to note GTE Wireless participates in only 30 percent of the rate centers in its coverage area.⁷⁸ Therefore, CMRS carriers have fewer numbers to donate to the pools than originally suspected by the NANPA.

⁷⁶ See Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Fourth Report*, FCC 99-136 (rel. June 24, 1999).

⁷⁷ *NPRM*, ¶ 165.

⁷⁸ This figure is consistent with the figure of 30 percent participation for CMRS carriers nationwide. Companies that have higher levels of activity will see greater improvement in COCUS reporting if duplicate entries from Transitional Office Codes are
(Continued...)

In addition to requesting information on the benefits of CMRS participation, the Commission seeks comment on the cost to implement CMRS participation in number pooling.⁷⁹ Critically, the Commission makes the incorrect assumption that LNP implementation means that pooling is automatically available. The costs of modifying wireless LNP to permit pooling are significant. Specifically, GTE Wireless estimates that it will cost at least \$60 million to implement LNP without any pooling capabilities. Then, in order to implement pooling, GTE Wireless would incur the following additional costs: (1) expenses associated with different reporting requirements; (2) network upgrade costs; (3) pooling administration and increased transactional and procurement costs; and (4) training and other internal carrier costs. Given the paucity of benefits associated with CMRS participation, the Commission must be particularly sensitive to the costs that CMRS carriers would incur to add pooling capabilities to their systems.

The time frame required to implement pooling after CMRS carriers have achieved LNP is another issue on which the Commission requests comment.⁸⁰ Wireless carriers could not be expected to implement thousand-block pooling in less than a period of 18 to 24 months. The exact time frame is difficult to determine, however, because the timing depends on the type of pooling involved (e.g., use of

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appropriately accounted for in the COCUS reports.

⁷⁹ *NPRM*, ¶ 166.

⁸⁰ *NPRM*, ¶ 167.

contaminated blocks versus uncontaminated blocks), which affects the types of changes to a CMRS carrier's network that would be necessary.

Also with respect to timing, the Commission asks commenters to address whether the benefits of pooling are such that they would justify an acceleration in the deadline to implement LNP among CMRS carriers.⁸¹ GTE cautions the Commission against asking carriers to meet too many regulatory mandates in a short period of time. CMRS carriers are already working to implement LNP, awaiting the announcement of the technical standards necessary to meet the assistance capability requirements of the Communications Assistance for Law Enforcement Act ("CALEA"), and deploying E911 systems. Adding another regulatory requirement at this time will severely strain the resources of wireless carriers. Specifically, in this instance, the FCC would place compliance with the LNP order in jeopardy if it were to order pooling for wireless carriers before LNP is implemented because carriers do not have the resources to comply with both requirements simultaneously.⁸² An accelerated number pooling

⁸¹ *NPRM*, ¶ 168.

⁸² While GTE Wireless believes that the FCC acted illegally when it chose to extend the LNP deadline, it recognizes that the FCC did so because the time frames in place would have compromised the wireless nationwide roaming network. As GTE has demonstrated in its petition for reconsideration of the Commission's recent order extending the compliance date for wireless LNP from March 31, 2000 to November 24, 2002, the Commission failed to comply with the obligations of Section 10 of the Communications Act by granting merely a time extension in lieu of granting full forbearance. See GTE Service Corporation Petition for Reconsideration, WT Dkt. No. 98-229 (filed May 27, 1999); see also CTIA's Petition for Forbearance from Commercial Mobile Radio Service Number Portability Obligations, WT Docket No. 98-229, CC Docket No. 95-116, *Memorandum Opinion and Order*, FCC 99-19 (rel. Feb. 9, 1999).

deployment schedule would further compromise the ability of smaller carriers to install the upgrades necessary to implement LNP.

The Commission also seeks comment on whether carriers that receive requests for LNP should be required to participate in pooling in areas outside of the 100 largest MSAs.⁸³ Such a piecemeal approach fails to recognize that, because of the Commission's roaming requirements, the CMRS network is in fact a single nationwide network.⁸⁴ Therefore, **all** wireless carriers would have to be LNP—Phase II capable if they are to be able to implement thousand-block pooling that permits the use of contaminated NXX codes.⁸⁵ Pooling could only be deployed on an all or nothing basis in the CMRS industry.

The Commission attempts to address this issue by requesting comment on the feasibility of deploying numbering conservation methods that would enable non-LNP-capable carriers to "participate" in pooling without having LNP capabilities.⁸⁶ The

⁸³ *NPRM*, ¶ 170.

⁸⁴ See 47 C.F.R. § 20.12(c).

⁸⁵ GTE has suggested that wireless carrier participation in thousand-block pooling is possible without splitting the MIN and the MDN as long as NXX codes were not "contaminated" with the presence of another wireless carriers' codes. See GTE Petition for Reconsideration, WT Dkt. No. 98-229, Declaration of Daniel S. Mead (filed May 27, 1999). Nevertheless, GTE does not endorse such an approach because it would divert needed resources away from LNP developmental work, with little real benefit for number conservation. GTE provided this information as evidence in its LNP Reconsideration Petition to rebut the FCC's factual assumption that LNP and number pooling are inextricably linked from a technical standpoint.

⁸⁶ *NPRM*, ¶ 174.

Commission cites as an example the assignment of numbers to paging carriers in thousand number blocks through direct-inward-dialing (“DID”) and then routing the numbers to paging carriers through PBX or Centrex trunks, thereby approximating thousand-block pooling.⁸⁷ GTE urges the Commission not to deviate at this late time from the LRN methodology that has been established by industry standards bodies and the FCC.

GTE endorses the Commission’s proposal to establish a number allocation method that does not discriminate unfairly in favor of either pooling participants or non-pooling participants.⁸⁸ Specifically, area code relief should be planned to ensure that no carrier is disadvantaged and that all carriers have sufficient numbering resources to compete in today’s environment. Thus, those carriers capable of pooling should receive numbers from the pool and those not capable of pooling should receive NXX blocks as they do today. In order for this scheme to function effectively, however, state commissions must ensure that there are effective number relief plans in effect to avoid jeopardy situations.

⁸⁷ *NPRM*, ¶ 174.

⁸⁸ *NPRM*, ¶ 176.

C. Pooling Implementation Issues

1. GTE supports the proposed T1S1.6 technical requirements for wireline carriers only

The Commission requests comment on the adoption of the T1S1.6 proposed technical requirements to be used to implement thousand-block pooling on a nationwide basis.⁸⁹ GTE supports the proposed T1S1.6 Technical Requirements for pooling as they pertain to wireline carriers. These requirements do not address porting between wireline and wireless carriers, and thus include no standards for the pooling of numbers between wireline and wireless carriers. In fact, there are no standards available for pooling involving wireless carriers, underscoring GTE's opposition to imposition of any number pooling on wireless carriers.

2. Administrative proposals

a. Reclamation of thousand-blocks

The Commission requests comment on whether it should allow carriers to donate contaminated thousand-blocks to the number pool.⁹⁰ While GTE recognizes that the INC has established an industry contamination standard of 10 percent,⁹¹ GTE believes that using *any* threshold contamination level, be it 10 or 25 percent, is detrimental to all

⁸⁹ *NPRM*, ¶ 178.

⁹⁰ *NPRM*, ¶ 188.

⁹¹ See Industry Numbering Committee Thousand-Block (NXX-X) Pooling Administration Guidelines, §§ 8.0, 8.1.4, 8.1.5 (Jan. 27, 1999).

industry segments porting numbers because of the increased complexity and cost contamination brings to the process. Using any level greater than zero also increases the risk that customers not involved in pooling will experience disruptions in service. The increased cost and complexity result from the fact that, ordinarily, working customer numbers within the thousand-block being ported need to receive special treatment in *both* companies' switches during and after the transition. Working customer numbers must be ported back into the original serving switch and marked as not available for assignment in the porting-to switch. Failure to handle these numbers properly will result in two customers being assigned the same number on different switches, and contamination only increases the probability of this occurring.⁹²

GTE strongly disagrees with MediaOne's proposal for different contamination levels for different industry segments.⁹³ Setting different levels of contamination for different segments of the industry is blatantly anti-competitive. Under MediaOne's proposal, ILECs would have to ensure that a greater amount of numbers were ported back into their switches than would CLECs, and, as such, would incur greater

⁹² Additionally, the ability to accommodate contamination would mean that **all** wireless carriers would have to implement LNP—Phase II with MIN/MDN separation. This result is the function of the fact that, if one CMRS carrier is require to be LNP-capable, then, in order to support roaming, **all** CMRS providers would have to be LNP-capable, regardless of whether they are ordered to participate in pooling or not. If, however, the Commission were to order pooling without contamination, wireless carriers could technically participate without MIN/MDN separation provided: (1) only one CMRS carrier participated in the pool; and (2) the numbers were confined to a single rate center. These conditions could allow wireless participation in localized pooling without nationwide impacts on roaming.

⁹³ *NPRM*, ¶ 189.

administrative costs. In addition, this difference in contamination levels would force ILEC customers to bear increased risk of service outages.

Moreover, forcing ILECs to port 25 percent of their customers in a pooled block while requiring a CLEC to port only 10 percent of its customers in a pooled block would fail to utilize efficiently the numbering resources. In particular, because CLECs hold the majority of the NXXs in most new NPAs, CLECs, not ILECs, have the most lightly contaminated blocks to donate to the pool. Further, CLECs have less of a demand for numbering resources because the majority of CLEC customers had their numbers assigned from the ILEC pool when they were ILEC customers, and then ported to the CLEC. As a result, CLEC demand for new numbers is limited in most cases to providing customers with second-line numbers for residential users and growth numbers for their business users. This is reinforced by the fact that, if the main requirement for CLECs was in new numbers, the whole development of LNP would have been unnecessary.

Moreover, the use of contaminated blocks will reduce the ability to store numbers in ranges using a small number of data entries, consistent with the NPAC's development of an efficient data representation approach to storing numbers in ranges. For example, an uncontaminated thousand-block can be stored with the use of only two ten-digit numbers and a range indicator. A random distribution of 25 percent of these numbers would, however, result in a worst case scenario requiring the storage of 750 numbers plus 250 entries signifying the numbers in a range. This graphically illustrates the point that, as the contamination threshold increases, the use of range indicators ceases to provide any data storage benefit and all numbers will need to be stored

individually. This has the effect of dramatically increasing storage requirements in industry-wide LNP databases.

b. Sequential number assignment

The Commission recognizes that the implementation of thousand-block pooling will require some period of time. To that end, comment is sought on whether carriers should be required to assign numbers sequentially (“sequential number assignment”) and where this policy should be implemented.⁹⁴ Initially, it is important to note that the term “sequential number assignment” refers to the sequential assignment of thousand-blocks to carriers, not the sequential assignment of individual telephone numbers to end-users. This numbering management tool will facilitate the prospective implementation of number pooling and increase thousand-block utilization. However, guidelines have not been developed with respect to this component of thousand-block pooling. As a result, the guidelines that have been developed at the state level differ significantly. Therefore, the FCC should direct the INC to review the existing guidelines proposed and implemented in several states⁹⁵ by industry members and develop a national position. Once a uniform national standard is established, the FCC may delegate authority to the states to set an implementation schedule and to require all carriers to participate.

⁹⁴ *NPRM*, ¶¶ 190-91.

⁹⁵ These states are California, Minnesota, and Florida.

c. Inventory

Finally, the INC Thousand-Block Pooling Administration Guidelines propose a nine-month inventory of numbers to be held by each of the pooling administrator and each service provider.⁹⁶ The Commission requests comment on whether these inventory levels are appropriate “to assure adequate access to numbering resources” while, at the same time, avoiding the waste associated with unused numbers.⁹⁷ GTE agrees with the INC Thousand-Block Pooling Guidelines, and believes that an individual company inventory of nine months is appropriate and avoids the waste associated with unused numbers.

3. Cost recovery

The Commission requests extensive comment on the methods by which the costs of implementing numbering optimization should be recovered.⁹⁸ The Commission should first decide how number resource allocation and conservation should be accomplished before it gets mired in the detailed mechanics of any cost recovery mechanisms. Thus, it may be premature for the Commission to determine exactly how any thousand-block number pooling implementation costs might be recovered.

⁹⁶ See Industry Numbering Committee Thousand-Block (NXX-X) Pooling Administration Guidelines, §§ 8.0, 8.1.5, 8.1.6, 8.1.8, 8.3.2, 8.3.3 (Jan. 27, 1999).

⁹⁷ *NPRM*, ¶ 192.

⁹⁸ See *NPRM*, ¶¶ 193-210.

Moreover, at this time, the Commission has not yet established a factual record to determine whether thousand-block number pooling or some other means of number resource management best serves the public interest. Thus, it is also premature to exclude any class of customers, including end-users, from the financial burdens associated with thousand-block number pooling and other conservation measures.

a. Pooling-specific costs

In the *NPRM*, the Commission asks for comment on the definition of costs directly related to thousand-block pooling implementation, stating that it has tentatively concluded “that costs not directly related to thousand-block pooling implementation are not costs of thousand-block implementation.”⁹⁹ The Commission should recognize that any recovery mechanisms adopted in this proceeding must consider and build upon the decisions already made in the LNP proceedings.¹⁰⁰

In particular, to the extent that any carrier-specific costs already have been excluded from recovery by the LNP cost recovery mechanisms because those costs were related to both LNP **and** thousand-block number pooling, these joint costs should now be recoverable in thousand-block pooling cost recovery mechanisms. Thus, implementation costs that are related to **both** the implementation of LNP and thousand-

⁹⁹ *NPRM*, ¶ 199.

¹⁰⁰ In the local number portability proceedings, the Commission determined that the definition of LNP-specific costs would exclude any costs not directly related to LNP. See *Telephone Number Portability*, First Report and Order, 11 FCC Rcd 8352, 8415 (1996).

block number pooling should now be **included** in the number pooling cost recovery mechanisms because they were **excluded** from the LNP cost recovery mechanisms. The Commission must not impose an unreasonable rule whereby costs clearly and specifically attributable to the combination of both LNP and thousand-block number pooling are not recoverable from either of the two specific recovery mechanisms.

b. End-user charges, price cap baskets, and exogenous treatment

The *NPRM* tentatively concludes that carriers may not recover their carrier-specific costs associated with thousand-block pooling implementation through an end-user charge.¹⁰¹ The *NPRM* also asks whether price cap carriers should be permitted to treat exogenously any of the thousand-block pooling implementation costs.¹⁰² Further, the *NPRM* asks whether these costs should be placed in a new price cap basket or an existing basket.¹⁰³ As a general matter, discussion of these issues is premature—when the numbering resource management solutions that the Commission might adopt have become more settled, a determination of a recovery mechanism from customers and the proper mechanics in price cap and rate-of-return regulation then can be decided.

Against that background, however, GTE wishes to make a number of points regarding cost recovery. First, the FCC is much too quick to dismiss recovery of

¹⁰¹ *NPRM*, ¶ 204.

¹⁰² *NPRM*, ¶ 205.

¹⁰³ *NPRM*, ¶ 205.

thousand-block number pooling costs from end-users. A balanced cost recovery plan that distributes the cost of number conservation measures across all users of telecommunications services would be the most equitable method of cost recovery. Knowing which numbering solutions will be adopted, however, is critical to understanding this balance.

Second, unless the Commission substantially revises its exogenous cost mechanism, that mechanism does not provide the proper flexibility to obtain cost recovery for a newly established rate element. Instead, the exogenous cost mechanism assumes in its basic design that the cost recovery sought by the price cap carrier will be achieved from an across-the-board increase in all rate elements in the specific price cap basket(s) to which the exogenous adjustment is applied. Importantly, exogenous treatment provides a mechanism with an explicit assumption that rate recovery will be achieved uniformly across all services within the basket(s). This assumption, however, is totally inconsistent with a rate design that targets recovery to a specific rate element. Thus, the carriers and the Commission should first decide overall rate design. After specific rate design(s) are agreed upon, it may become clear that the exogenous treatment mechanism will not accomplish the specific objectives of that appropriate rate design(s).

Third, the Commission should not create a new price cap basket or subindex each time it considers a new cost recovery issue. An appropriate approach may be to establish a new rate element, either within the existing price cap basket and banding structure, or totally outside of price cap regulation. Under this approach, the new rate element would be treated as a new service under the price cap rules. Thus, the new

rate element would be assigned to an existing price cap basket and included in the existing price cap constraints pursuant to the treatment of new services in a subsequent annual filing. This option assumes that the carrier will recover the number pooling costs from a single (or a few) rate element(s).

A simpler approach would be not to include any of the number pooling rate elements in price caps at all. If it is possible to exclude the costs of numbering solutions from jurisdictional separations, then it is also feasible to exclude those same costs from any cost-related price cap calculations.

c. Per-number charge

The *NPRM* questions whether the cost of number pooling should be recovered through a per-number charge, which would require carriers with larger quantities of numbering resources to make larger contributions to pooling costs than carriers with smaller quantities of numbering resources.¹⁰⁴ In this discussion, the Commission appears to confuse two concepts: (1) a recovery mechanism for mandated costs and (2) a tax on, or price for, the use of numbering resources.

With regard to cost recovery, if the costs incurred by a carrier are lawful regulated costs, a recovery mechanism should be available to the carrier to recover all of those costs from parties other than the carrier itself, that is, from customers. All

¹⁰⁴ *NPRM*, ¶ 206; see also *NPRM*, ¶ 207 (“We also seek comment on whether tying cost recovery for pooling to the quantity of numbers held by each carrier would provide economic incentives to participate in the pooling process by donating excess blocks back to the pool.”).

appropriate regulated costs eventually find their way to prices paid by customers. By contrast, the *NPRM* seems to imply that the carrier might pay a major share of these costs.¹⁰⁵ That view is wrong. Most of the costs of thousand-block pooling implementation would have little to do with the amount of numbering resources that a carrier ultimately retains to satisfy the demands of its customers. The costs of thousand-block pooling have much more to do with the carrier-specific hardware and systems changes, regardless of the inventory of numbering resources used by the carrier.

Regarding a tax on the use of telephone numbers, GTE does not understand how a cost recovery mechanism can adequately recover a carrier's costs (including shared industry costs and carrier-specific costs) and simultaneously penalize that same carrier for its use of numbering resources. These two objectives seem irreconcilable. The fundamental objective of the cost recovery mechanism should be cost recovery. Other means should be used for providing incentives for efficient use of numbering resources.

d. No explicit cost recovery

The *NPRM* asks whether the Commission should establish thresholds for efficient usage of numbering resources and let carriers determine the particular

¹⁰⁵ See *NPRM*, ¶ 206.

technical solutions of achieving these mandatory thresholds.¹⁰⁶ The Commission goes on to state that:

If we allow carriers to choose the method for achieving compliance with the mandatory threshold levels, we tentatively conclude that carriers would bear their own implementation costs, whether they meet the mandatory threshold levels through thousand-block pooling implementation or by some other means.¹⁰⁷

GTE disagrees with the Commission's attempt to answer this question at this time. As discussed above, until the basic outline of the numbering resource management and conservation solutions that the Commission may direct the industry to adopt are articulated, it is premature to determine whether carriers should bear those costs as part of their general network upgrades.

4. Transition issues

One of the issues raised by the Commission in the *NPRM* is whether individual telephone number pooling could replace thousand-block pooling in the future because it has the potential to eliminate "stranded" numbering resources.¹⁰⁸ GTE observes that the NANC Report presents only a very high level analysis, and much more work needs to be done to further define ITN pooling. As currently defined, ITN pooling would require companies to maintain an internal inventory of numbers in addition to having

¹⁰⁶ *NPRM*, ¶ 208.

¹⁰⁷ *NPRM*, ¶ 208.

¹⁰⁸ *NPRM*, ¶ 212.

access to an ITN pool. Further, it appears that, to provide full benefits of ITN pooling, all companies would be required to have access in real time to the same pool of numbers to be assigned to customers. Yet, as currently defined, there does not appear to be any significant synergy between thousand-block pooling and ITN pooling. In fact, some of the actions being taken to equip the NPAC for thousand-block pooling (such as thousand block range indicators) would not be required in an ITN pooling environment. Therefore, it appears that, if ITN pooling is implemented, the transition from thousand-block pooling would represent more of a “flash-cut” transition rather than an orderly migration because the architecture and assignment process of the two systems might very well be significantly different.

In addition, the Commission requests commenters to address the costs and benefits of moving from thousand-block pooling to ITN pooling and whether there are other implementation barriers to such a transition.¹⁰⁹ Since the mechanisms for obtaining numbers under ITN pooling are different than those utilized for thousand-block pooling, there is nothing that necessarily hinders any possible future migration to ITN. GTE, however, questions the benefits that would result from a transition to ITN pooling. Of note, with the occurrence of larger rate centers obtained through RCC, ITN pooling will provide minimal benefits by the time it could be deployed.

Finally, the Commission seeks comment on whether unassigned number porting (“UNP”) can be used at the same time as thousand-block pooling and if any special

¹⁰⁹ *NPRM*, ¶ 213.

requirements need to be imposed on one or the other to achieve simultaneous use.¹¹⁰

It is GTE's view that, given proper administration and modifications to existing operations systems, UNP can operate in conjunction with thousand-block pooling. Widespread use of UNP will, however, reduce the number of lightly contaminated and uncontaminated thousand blocks. It could also make the job of determining which numbers must be restricted from assignment (*i.e.*, those already ported or in-service) more difficult since there would be a greater chance that numbers would be distributed across multiple carriers. The simultaneous use of UNP could also reduce the number of thousand-blocks from existing NXX codes that could be pooled.

D. Carrier Choice of Numbering Optimization

In addition to considering mandating a specific numbering solution, the Commission seeks to examine whether or not an incentive-based mechanism could be used to develop the appropriate numbering optimization solution. To that end, commenters are asked to discuss whether the Commission should simply set thresholds for efficient use and leave the choice of method up to the carrier.¹¹¹ As an initial matter, carriers do not have the authority to require rate center consolidation or overlays, which are the best ways to ensure high utilization levels and prevent exhaust. In addition, it is not practical to allow carriers to state that they will maintain certain utilization levels because each carrier would interpret its own process to comply with

¹¹⁰ NPRM, ¶ 214.

¹¹¹ NPRM, ¶ 216.

the utilization level. Moreover, an incentive-based approach would also create great difficulties for enforcement and audit. Finally, for CMRS carriers, such an approach is impractical because of issues raised by roaming and the use of clearinghouses. Here, the individual selection of an optimization method could disrupt seamless roaming.

V. AREA CODE RELIEF

In its examination of the present methods used to provide NPA relief, the Commission requests comment on geographic splits and various types of overlays. GTE has consistently argued that one of the best ways to address a telephone number shortage in the short-term is to use an all-services overlay to implement a new NPA code.¹¹² Unlike a geographic split, an overlay does not require customers to change numbers or require numbering administrators to make accurate forecasts for two NPAs. And, unlike a service- or technology-specific overlay, an all-services overlay is competitively neutral, if mandatory ten-digit dialing is required.

A. Area Code Splits

The Commission requests extensive comment on the advantages and disadvantages of geographic splits relative to other methods of area code relief.¹¹³ GTE submits that there are many negative impacts of geographic splits, with few offsetting benefits. Preliminarily, geographic splits result in an inefficient utilization of numbers

¹¹² See, e.g., Comments of GTE, DA 98-2265, NSD File No. L-98-134 (filed Dec. 21, 1998).

¹¹³ *NPRM*, ¶ 249.

because perfect forecasting is required to ensure that both NPAs will reach exhaust simultaneously. These forecasts are further complicated by the fact that the NPA boundaries are determined by political expediency rather than a strict adherence to the forecast. Typically, one NPA will exhaust well before the other, a result that cannot occur if overlays are used instead. Geographic splits also require lengthy state commission hearings to establish boundary lines because of the negative impact on consumers. In addition, they result in approximately half of the customers being required to change their numbers and associated stationary, business forms, and advertising materials. Further, other customers will be required to re-program their wireless phones, which must be done by qualified personnel. Finally, as the geographic area encompassed by each NPA gets smaller and smaller, an increasing number of customers must dial ten digits. In sum, geographic splits have the same disadvantages attributed to overlays (ten-digit dialing), but none of the benefits.

B. Overlays in General

On the other hand, the use of overlays instead of geographic splits would result in significant benefits to both consumer and carriers. Overlays provide consistent treatment for future relief plans and make efficient use of numbering resources. They require less dependence on forecasting, and eliminate the need for customers to change their telephone number when relief occurs. Moreover, if additional relief is required after the initial overlay is implemented, a third NPA can be added with minimal customer impact. In fact, this approach has recently been accomplished in the area codes associated with the Houston and Dallas areas. An overlay policy is a more

competitively neutral approach to area code relief than is afforded by utilizing area code splits. It also simplifies the inevitable transition to ten-digit dialing on a national basis. In fact, a national policy to utilize overlays would create a consistent dialing plan throughout the United States. Finally, because overlays reduce the need for lengthy and contentious argument on where to draw specific boundary lines (which occurs in the case in area code splits), they reduce the time frame to implement future area code relief. It is GTE's view that there are few, if any, significant negative drawbacks to such a policy.

Although some may argue that mandatory ten-digit dialing is a deficiency of an overlay approach, in reality, ten-digit dialing is already being implemented for an increasing number of customers as the geographic area covered by area code splits becomes increasingly smaller. With the implementation of overlays in a number of existing areas, the operational issues are well understood and no more cumbersome than those encountered with area codes splits. GTE has already implemented ten-digit mandatory dialing and overlays in Texas (Houston and Dallas) and Pennsylvania with minimal customer impact and operational difficulty. One further advantage to implementing a nationwide overlay policy and ten-digit dialing is consistent customer education. This will reduce the overall cost of the education plan and at the same time reduce customer confusion.

In the vast majority of industry meetings this year, the industry consensus has been to implement overlays. It is acknowledged that this approach provides a more efficient utilization of the numbering resource. A majority of state commissions have, however, overruled this industry consensus because of what can best be described as

an apparent irrational fear of ten-digit dialing. For instance, in Kentucky, the implementation of an overlay was underway and permissive dialing had begun when the state commission stopped the deployment and ordered a split. Contrary to the state commissions' beliefs, in areas where overlays have been implemented with proper customer education, the additional dialing has been well received **and** the demand for additional relief has been reduced.

C. All-Services Overlays

The Commission also requests commenters to address the advantages and disadvantages of the use of all-services area code overlays as compared to other area code relief measures.¹¹⁴ Initially, there was concern about the operational changes that needed to take place to implement an all-services overlay. As the number of overlays implemented across the country has increased, most carriers have already made those changes required to support an all-services overlay to their existing operating systems. For example, all-services overlays have been implemented in Colorado, New York, Texas, Maryland, Georgia, Pennsylvania and Florida and are planned for other states (California, Oregon, and Washington).

From a customer perspective, all-services overlays result in a significant reduction in cost associated with signage and company letterhead. Purchasers benefit further because they are not required to advise customers of changes. GTE's own experience bears this out. In fact, GTE has implemented a **third** area code overlay in

¹¹⁴ *NPRM*, ¶ 252.

Texas for a lesser cost than the initial overlay. The educational efforts—sending out bill inserts for the codes authorized for Dallas and Houston—compared to past relief plans required a far smaller expenditure of resources and minimal state commission involvement because of the earlier consumer experience. Such efficiencies are not possible with a geographic split because continuing consumer education about whose numbers did and did not change is necessary before and after every split.

Finally, GTE strongly encourages the Commission to prohibit the use of area code splits when they would result in reducing the size of a rate center.¹¹⁵ Such a reduction in rate center size increases the number of NXX codes required by carriers to compete in a given area. As such, this policy exacerbates the numbering shortage. This approach is also anti-competitive because it reduces the geographic area over which customers can port their numbers. In addition, when splits reduce the size of the rate center, they force some consumers to take full ten digit number changes rather than just changing the area code.

D. “Reverse” Overlays

Another overlay option is the so-called “reverse” or “retroactive” overlay, which has the effect of combining two geographic areas by overlaying two existing NPAs over each other. The Commission seeks comment on this method.¹¹⁶ As a company operating in the Dallas and Houston metropolitan areas, GTE has first hand experience

¹¹⁵ This has already been done in Minnesota and Arizona.

¹¹⁶ *NPRM*, ¶ 253.

with the reverse overlay, which was used because the two new area codes exhausted at different rates. GTE notes that, had the Texas PUC used an overlay from the beginning, this entire “reverse” overlay process could have been avoided. When presented with the facts, however, the Texas PUC made a courageous decision in the face of political pressure and reversed its earlier choice for a geographic split. The resulting overlay was handled easily with few customer problems. In fact, the PUC recognized the benefits inherent in an overlay and a third NPA was assigned to each overlay in July of 1999.

The combination of area code overlays and the implementation of a significant rate center consolidation has had positive results. With the adoption of these measures, the Dallas and Houston area will have sufficient numbering resources for several years. It is also significant that the overlay has not generated the consumer problems associated with a geographic split. In fact, the addition of a third NPA this summer, unlike past “solutions,” was almost a non-event. GTE strongly advocates the Commission’s consideration of this approach to ensure more efficient number assignment and reduce the conflict that often accompanies area code relief.

E. Size of All-Services Overlays

Comment is also requested on how the size of an all-services overlay could affect the advantages and disadvantages of the overlay solution.¹¹⁷ One rarely mentioned benefit of overlays is that those implemented thus far have allowed

¹¹⁷ *NPRM*, ¶ 254.

customers to keep geographic designations. That is, by looking at the area code, the calling party has a good understanding of the geographic location of the number he or she is dialing. Even in Dallas, where there are now three area codes overlaying the same area, customers understand that dialing a number from one of those NPAs will result in a call terminating in the Dallas Metropolitan area. If an overlay encompassed several NPAs, this information would be lost. Further, if a new NPA were to cross state boundaries, additional jurisdictional problems would be created. For instance, how would each state utility commission divide jurisdiction over the optimization solutions implemented in the NPA? Therefore, GTE recommends that overlays be restricted to an existing NPA, or in the case of a reverse overlay, a boundary change that allowed two codes to operate in the same geographic area.

GTE disagrees with the Commission's statement that "[c]reation of expanded area codes would also raise complex rating and billing issues, however, because the overlay NPA would have a larger calling area than the underlying NPAs it overlaps."¹¹⁸ Simply expanding the area over which NXXs from a specific NPA can be assigned has nothing to do with the calling scope. NXXs would still be assigned on a rate center basis. Therefore, from a technical perspective, while expanding the overlay will involve some additional database work, it does not impact the ability to rate or bill calls any more than using an overlay with a smaller geographic footprint. What would be confusing is that if an overlaid NPA encompasses a large geographic area, the

¹¹⁸ *NPRM*, ¶ 254.

customer will have no idea where they were calling based on the NPA. Thus, it is this loss of geographic significance that would be the most confusing and therefore should be avoided.

F. Technology/Service-Specific Overlays

With respect to technology-specific overlays (“TSOs”) and service-specific overlays (“SSOs”), the Commission asks if there are any potential new benefits that it did not previously contemplate.¹¹⁹ GTE does not think that the use of NPAs for specific technologies or services is appropriate for at least two reasons. First, a technology-specific overlay could impede achievement of dialing parity by requiring, *e.g.*, that calls to wireless customers have ten digits while calls to landline customers would only necessitate seven digits. By adding this additional barrier to consumer acceptance, designing a system that determines the service or carrier on the basis of NPA runs counter to the Commission’s desire to encourage the development of new telecommunications services.

Second, with a technology-specific or service-specific overlay, the affected carriers and their customers bear a disproportionate share of the burden associated with implementing a new NPA. This unequal burden would constitute both an unreasonable discrimination and an unreasonable practice.

The Commission also requests comment on whether there are particular services or technologies that could use TSOs or SSOs without raising competitive

¹¹⁹ *NPRM*, ¶ 257.

concerns.¹²⁰ The designation of an NPA for a specific technology runs the risk of inefficient assignment of numbering resources in the event that the targeted service or technology does not have the ability to utilize the numbers contained in the NPA. Similarly, GTE believes that TSOs and SSOs run the risk of sub-optimizing the assignment of the numbering resources. Thus, GTE does not think, in response to the Commission's request for comment on the efficacy of a TSO or SSO,¹²¹ that this method is the best alternative.

In addition to simply examining TSOs and SSOs, the Commission requested comment on the efficacy of such overlays when used in conjunction with other numbering optimization methodologies, such as pooling.¹²² Establishing TSOs and SSOs is inefficient and anti-competitive and should not be pursued. There is no reason why LNP-capable and non-LNP-capable carriers should not be able to coexist within the same NPA. In such a case, the LNP-capable carriers would receive numbers in blocks of 1,000 and the non-LNP-capable carriers would receive numbers in blocks of 10,000. Once a non-capable carrier became LNP-capable, it could then donate unused blocks to the pool.

Finally, the Commission seeks comment on whether it should adopt general rules and guidelines governing TSOs and SSOs and whether the authority to create

¹²⁰ *NPRM*, ¶ 258.

¹²¹ *NPRM*, ¶ 259.

¹²² *NPRM*, ¶ 260.

such overlays should be delegated to the states.¹²³ GTE is not convinced that the use of TSOs or SSOs will provide any measurable long-term relief. On the contrary, if implemented, they may in fact hasten the exhaust of the NANP because they could strand numbers if the service or technology did not require a complete NPA. GTE instead supports the FCC's current policy of not providing any exceptions to the existing prohibition against TSOs or SSOs.¹²⁴

VI. CONCLUSION

Steps must be taken to remedy the crisis in the current nationwide numbering allocation scheme. Rather than focus on quick-fix proposals and short-term solutions with costs that outweigh any benefits, GTE urges the Commission to take steps that have a strategic focus and will address the numbering problem for the long term. At the same time, any solution the Commission adopts must not discriminate against or in favor of discrete industry segments or carriers and allow all segments of the industry the access to those numbering resources that they need. In the foregoing, GTE has illustrated how a nationwide program that requires rate center consolidation, implements a phased introduction of mandatory ten-digit dialing, emphasizes the use of NPA overlays, and uses thousand-block pooling judiciously for wireline carriers provides benefits that outweigh their costs and directly attacks the root causes of the numbering crises. Further, GTE has suggested guidelines for the implementation of

¹²³ *NPRM*, ¶ 261.

¹²⁴ *See* 47 C.F.R. 52.19(c).

such a policy that would not prevent those carriers who cannot participate in every aspect of the program from obtaining a resource that is vital to the competitive survival of telecommunications carriers—the telephone number. As the Commission is well aware, the hoped-for revolution in telecommunications services and competition depends wholly upon the ability of telecommunications carriers and customers to obtain and use that humble, yet critical, resource.

Respectfully submitted,

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CERTIFICATE OF SERVICE

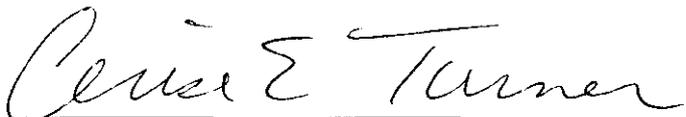
I, Cerise E. Turner, do hereby certify that on this 30th day of July, 1999, a copy of the foregoing Comments of GTE was served by courier to the parties listed below:

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