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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

September 29, 1999

Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Ex Parte Concerning Numbering Resource Optimization, CC Docket No. 99-200

Dear Ms. Salas:

On September 29, 1999, Philip McClelland, Joel Cheskis, Cammie Shoen from the Pennsylvania Office of Consumer Advocate, and Dr. Lee Selwyn, President, Economics and Technology, Inc., made a presentation in the above proceeding to Mr. Yog Varma and his staff and Mr. Mark Schneider from the Office of Commissioner Susan Ness on behalf of the National Association of State Utility Consumer Advocates. Please also find attached the documents presented in those meeting.

Sincerely yours,

Philip McClelland
Senior Assistant Consumer Advocate

54649

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# Numbering Resource Optimization

# CC Docket No. 99-200
# FCC 99-122

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## An Overview of the Joint Comments of NASUCA and the Texas Office of Public Utility Counsel

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Federal Communications Commission
Office of Secretary

# Principal NASUCA / Texas OPUC Positions

I. The current numbering crisis demands immediate and decisive action; further delay serves only to eliminate options

II. Exhaust and expansion of the NANP must be placed "off the table."

III. State PUCs should be given the authority to implement number pooling

IV. State PUCs should have the latitude to implement service-specific o technology-specific area code overlay plans or to require that non-LNP capable carriers be shifted to overlay NPAs

V. Rate center consolidation should not be a prerequisite for adopting other forms of number resource conservation.

# Principal NASUCA / Texas OPUC Positions

VI. Mandatory 10-digit dialing on all home area code calls offers minimal number resource benefits and creates significant costs and inconvenience for users

VII. Requiring payment from carriers for numbers is premature at this time.

VIII. "Carrier Choice" is neither feasible, fair nor effective, and should not be pursued.

IX. The FCC should define and enforce rules for numbering administration

# I. The Current Numbering Crisis

**The introduction of new area codes across the country has resulted in inconvenience, confusion, costs, and an anti-competitive environment with respect to new entrants:**

- **Since 1995, more than 111 new area codes have been or are currently in the process of being established in 32 states nationwide.**
- **Through 2000, an estimated 70% of all US telephone subscribers will have faced number and/or dialing protocol changes**
- **Consumers have faced number changes and have been forced to learn complex dialing patterns to complete local calls**
- **Due to repeated number changes, businesses have expended resources and suffered losses when customers have been unable to contact them**
- **The lack of availability of numbers in the recognized area code either discourages new entrants from coming to market or forces them to accept unfamiliar "overlay" numbers that disadvantage them competitively**

# Growth in NANP Area Codes

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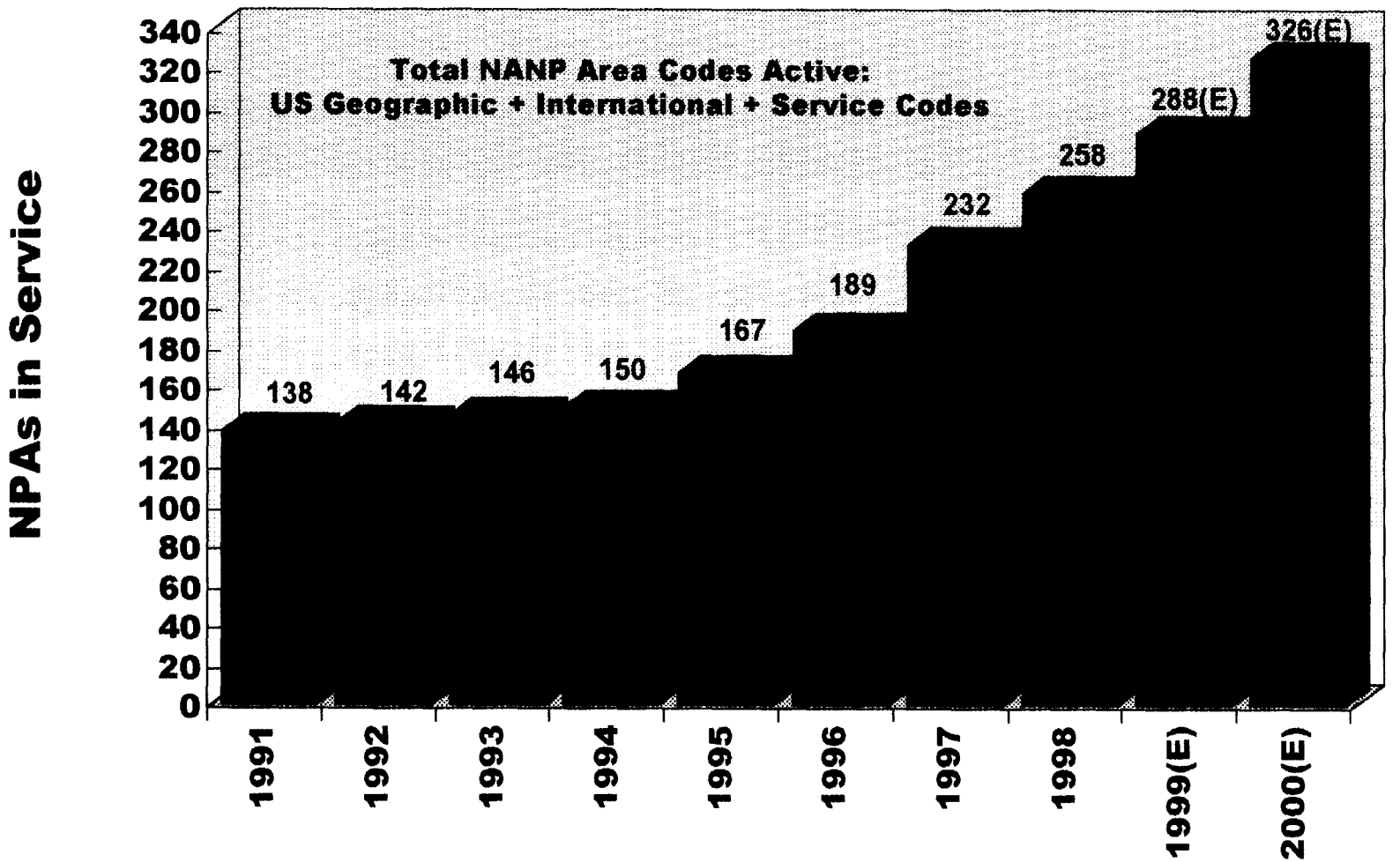

# I. The Current Numbering Crisis

**States are prepared to address number optimization and area code conservation measures, and the FCC should permit them to do so**

- **Through an interim order, state PUCs should immediately be authorized to pursue the following numbering measures:**
  - **Number pooling solutions, such as thousands-block pooling and unassigned number porting ("UNP")**
  - **Overlays limited to non-LNP capable carriers**
  - **Dialing protocols**

**The FCC should not preempt state initiatives in number management while at the same time deferring its own action on these very same issues**

# I. The Current Numbering Crisis

**In assessing numbering policies, the FCC should seek to *minimize* consumer costs and burdens and *maximize* competitive neutrality.**

- **Financial and societal costs resulting from area code changes are substantial, whether or not capable of being quantified precisely**
- **The FCC's previous attempts at limiting competitive disadvantages when implementing numbering policies have not always succeeded.**
  - **For example, service- and technology-specific overlays unintentionally foster competitive disparity between ILECs and CLECs by assigning a disproportionate amount of numbers in the recognized geographic area code to incumbent carriers while entrants are forced to use numbers in the new overlay code that prospective customers may be less willing to accept**

# II. Exhaust of the North American Numbering Plan

**Exhaust and expansion of the North American Numbering Plan ("NANP") is "unthinkable;" immediate action is required to avoid this outcome.**

- **NANP exhaust is entirely avoidable if needed number conservation measures are implemented quickly.**

- **Exhaust of the NANP has been forecasted to occur in the 2006 to 2012 time frame, based upon the current rate of number assignment and newly-introduced area codes.**

  ***Number Utilization Forecast and Trends*, Lockheed Martin CIS, Feb. 18, 1999 ("Number Utilization Study"), at 17.**

- **Only 328-million of the total 6.4-billion unique telephone numbers are in use, leaving 95% of the theoretical capacity of the NANP available for assignment to customers.**

  **Number Utilization Study, at 8.**

# NANP Exhaust Based on CO Code Projections (Bottom-Up Model)

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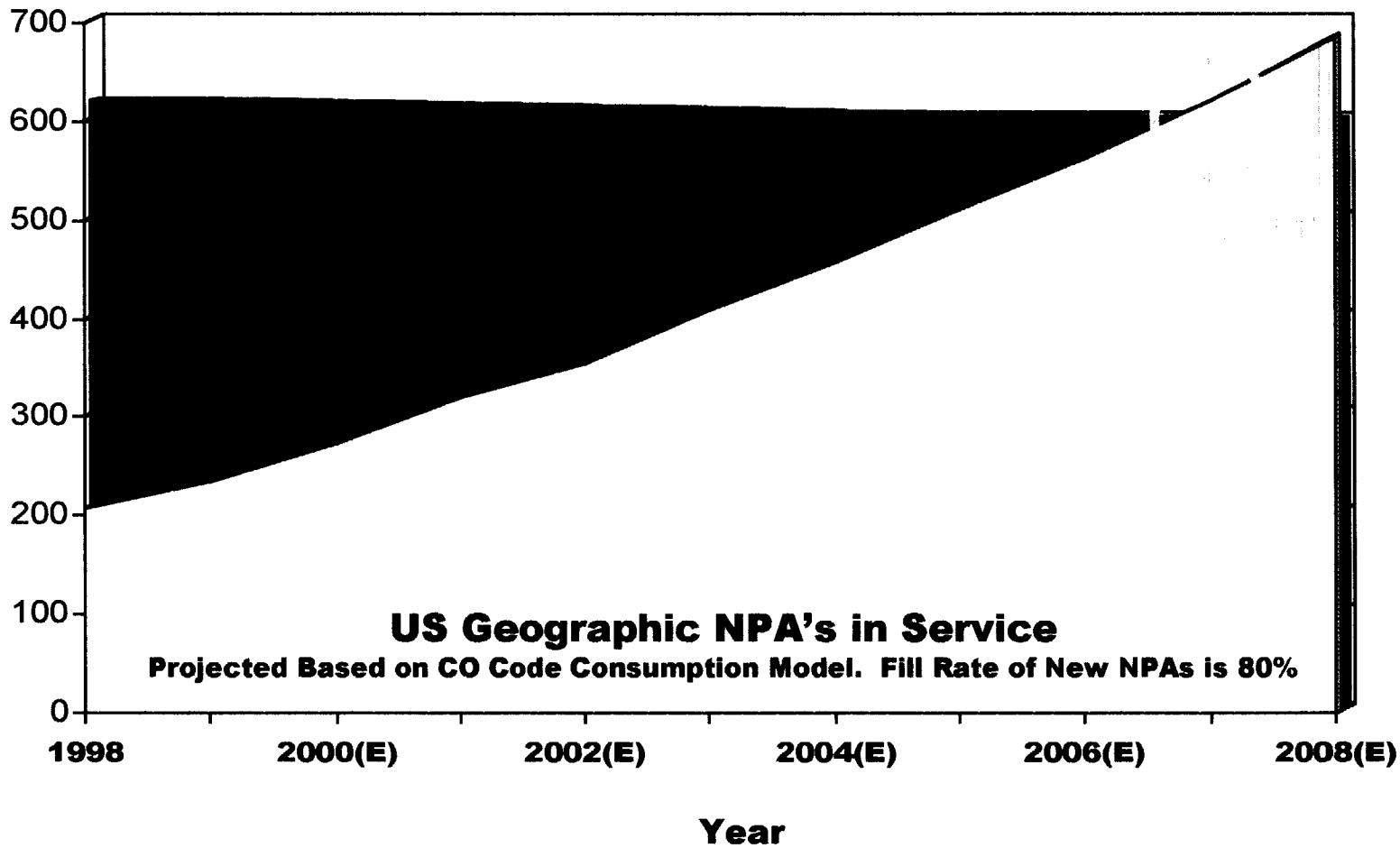

# II. Exhaust of the North American Numbering Plan

**Expansion of the NANP will result in extreme societal and economic disruptions and costs**

- **Regulatory delay could result in the irreversible exhaust of the NANP and the considerable costs that will inevitably follow:**

| | |
|---|---|
| **Software updates and hardware upgrades – telecommunications service providers . . . . . .** | **$50-billion** |
| **Software modifications – business/institutional/gov't information systems . .** | **$76-billion** |
| **Revision of all database entries containing phone numbers . . . . . .** | **$30-billion** |
| **Upgrades to PBX, alarm systems, E-911 systems . .** | **???** |
| **Total estimated cost of NANP exhaust** | **over $156-billion** |

- **Implementation of an expansion plan for the NANP cannot occur prior to the projected exhaust date for the NANP**

- **The NANC's $150-billion high-end estimate may well be exceeded**

# Estimated Telephone Number Utilization

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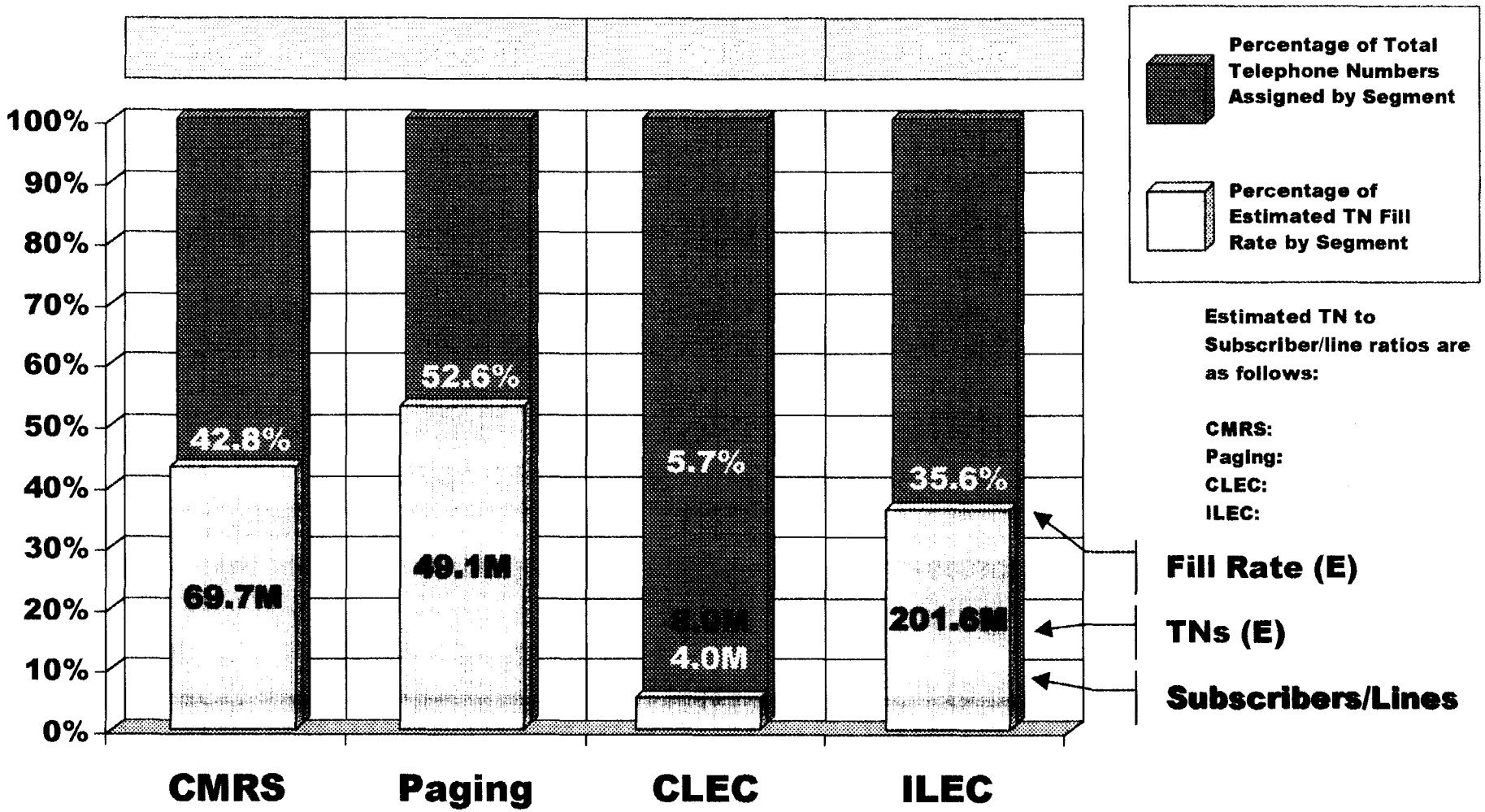


Source: FCC for wireline lines in service; DLJ for wireless subscribers YE98

# III. Pooling

**The FCC should immediately authorize state PUCs to implement number pooling in all of its possible forms.**

- **Number pooling relies on the LRN LNP infrastructure that is already in place:**
  - **Already deployed by wireline carriers in metropolitan areas**
  - **Consumers are paying more than $738-million annually for LNP**
- **Thousands-block pooling is insufficient for curing the substantial inefficiencies in the embedded base of numbers.**
- **UNP can be implemented by states immediately**
- **The FCC should immediately open an investigation on the feasibility of Individual Telephone Number pooling (ITN)**

**The limited benefits of national number pooling standards do not justify the delay in permitting pooling solutions to be implemented now**

# 1KB Pooling Impact on NANP Life

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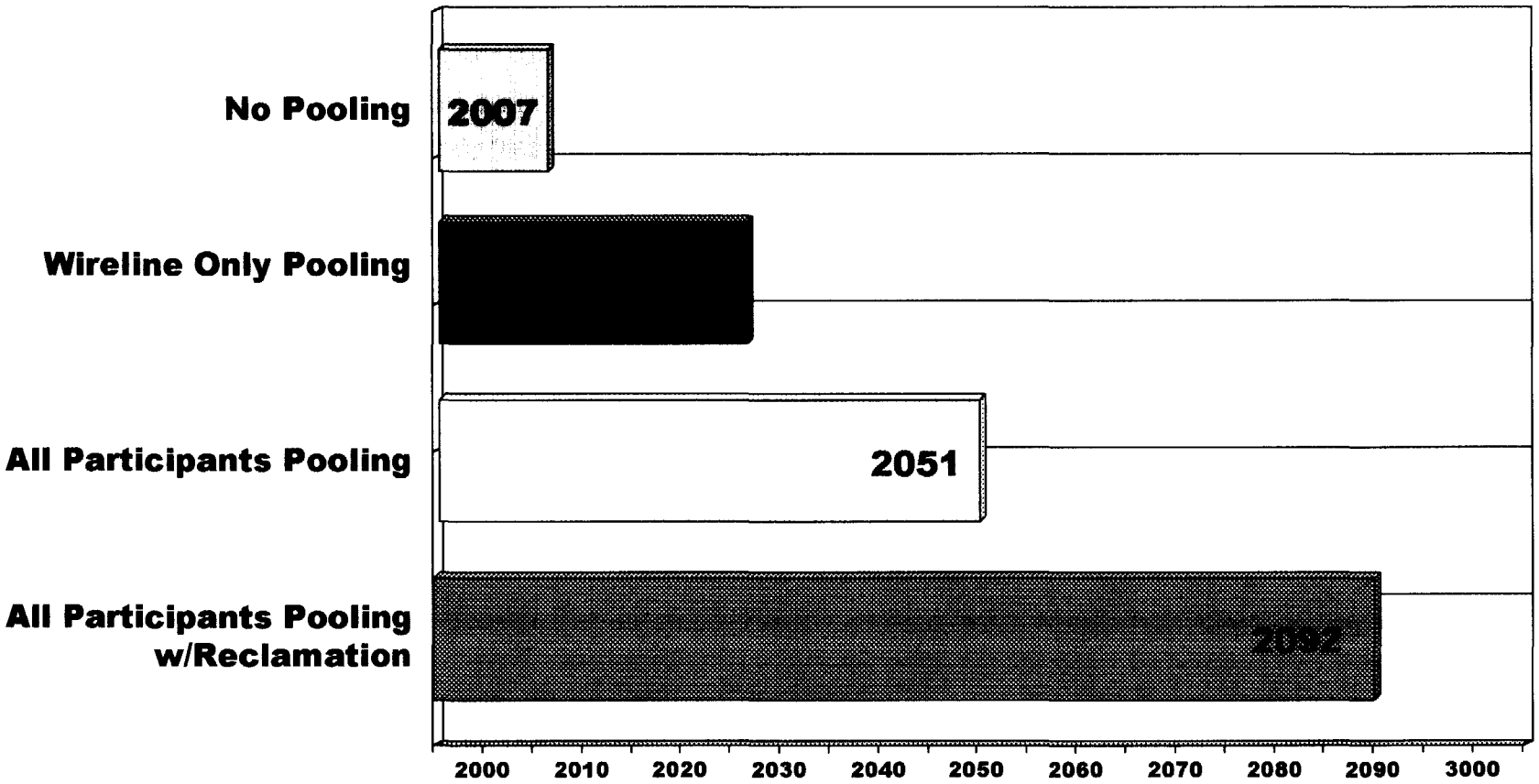
**NANP exhaust deferral based on 1KB pooling impacts on aggregate CO Code consumption model**



# III. Thousands-block Pooling

- A threshold contamination level of 10% will provide inadequate access to the embedded base of underutilized numbers, and also severely disadvantages new entrants

- States should have the authority to establish their own contamination thresholds.

- All uncontaminated or "lightly-contaminated" blocks of numbers should be returned to the pooling administrator for reallocation.

- Sequential number assignment should be ordered for LNP and non-LNP capable carriers in anticipation of pooling and to preclude carriers from intentionally contaminating thousands-blocks.

- Carriers exempt from LNP (I.e., wireless carriers) are incapable of providing number pooling, and should be relegated (along with their existing customer numbers) to an overlay area code to maximize the benefits of pooling in the traditional geographic NPAs.

# III. UNP/ITN Pooling

**The industry consensus on UNP and ITN understates the potential effectiveness of these number optimization measures**

- **The implementation of UNP should be ordered immediately, whereve LRN LNP is operational**
- **The implementation of thousands-block pooling must not delay moving forward on the implementation of UNP and ITN pooling**
- **The FCC should pursue implementation of ITN within three years, as opposed to the four- to six-year estimated time period that is based on "industry consensus."**
- **UNP and ITN would be a safety net for 1000 block pooling. Where few 1000 blocks are available, more extensive pooling through UNP and ITN can be required.**

# III. Pooling Costs

**Consumers have already paid for LRN LNP and should not have to pay again.**

- **Number pooling should be considered to be a normal "cost of doing business" resulting from the evolutionary growth of the PSTN.**
- **Pooling is far less costly than NANP expansion; therefore it represents a cost savings, not a cost onset.**
- **Cost recovery for number pooling via an exogenous price cap adjustment is not warranted**

# III. Pooling Costs

**Consumers are already being required to pay $3.7-billion for LNP, and should be afforded all other benefits of LNP (i.e., number pooling).**

**Monthly LNP Charges:**

| | Monthly LNP Rate Per Line ($) | Aggregate 5 year Recovery ($ millions) |
|---|---|---|
| Ameritech | 0.28 | 556 |
| Bell Atlantic | 0.23 | 601 |
| GTE | 0.36 | 459 |
| Bell South | 0.35 | 546 |
| Pacific Bell | 0.34 | 428 |
| SWBT | 0.33 | 471 |
| Sprint, all states | 0.48 | not available |
| US West | 0.43 | 410 |

Source: *Investigation Produces Investigation Produces Lower Number Portability Charges for Customers of Ameritech, GTE, Pacific and Southwestern Bell*, July 1, 1999 FCC News Release, Report No. CC 99-24, CC Docket No. 99-35. *FCC Investigation Produces Lower Number Portability Charges for Customers of US West Communications, Inc.*, July 9, 1999 FCC News Release, Report CC 99-26, CC Docket No. 99-35. Bell Atlantic Transmittal No.1123, filed April 12, 1999; chart 2c. BellSouth Transmittal No. 502, filed April 30, 1999; Appendix A, Bell South FCC No. 1, Section 13.3.21 (E) (1).

# IV. Service- and Technology Specific Overlay Codes

**The FCC's ban on service- and technology-specific overlays should end.**

- **Service- and technology-specific overlays do not competitively disadvantage wireless carriers.**
  - **Wireless carriers do not compete directly with wireline carriers and competition is not likely to materialize in the near future.**
- **A competitive disadvantage is present under an all-services overlay when *all* carriers desire numbers in the "traditional" geographic NPA:**
  - **ILECs and incumbent wireless carriers control an extensive inventory of these numbers.**
  - **CLECs, as direct competitors, have less access to these numbers and are forced to accept numbers in the new overlay code**
- **Service- and technology-specific overlays would free up NXX codes in the original NPA and create numbering parity for ILECs and CLECs.**
- **Handset reprogramming costs to change CMRS numbers have been exaggerated; costs to change paging numbers are virtually zero**

# CLECs are the Principal Source of Demand for New Codes

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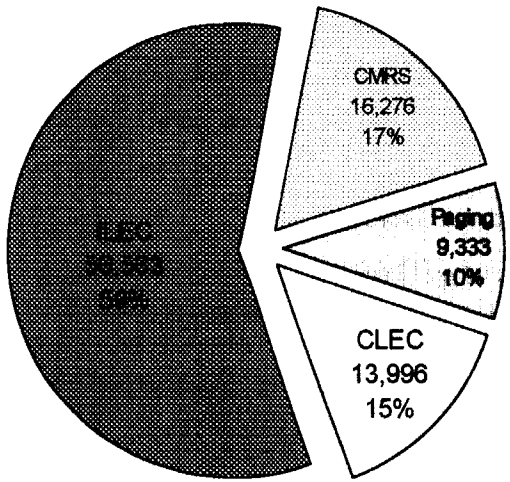
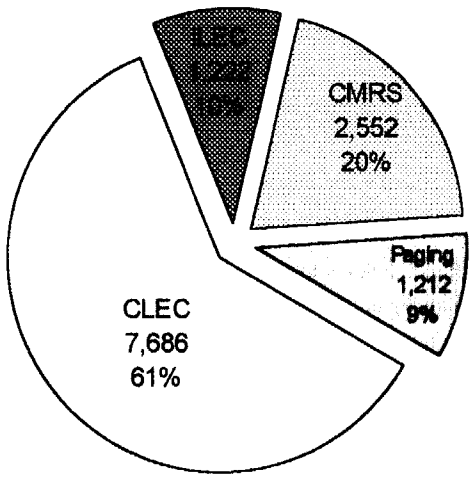
**Total CO Code Assignments (Year-end 1998)**

*96,120 total*




**Incremental 1998 CO Code Assignments**

*12,853 added in 1998 representing 15.4% growth from YE1997*




**Incremental CO Code growth drives Area Code consumption**

# V. Rate Center Consolidation

**Rate center consolidation (RCC) can extend the life of a relatively new NPA but cannot substitute for other number resource conservation measures.**

- **Absent number pooling, a major RCC effort will fail to conserve numbers.**
  - **Underutilized NXX codes cannot be shared among multiple carriers or among multiple rate centers**
- **The combination of number pooling and rate center consolidation enhances the effectiveness of both, as there are more numbers available for assignment**
- **Adoption of RCC should not be a prerequisite for authorizing state regulators to implement other forms of number resource conservation**

# VI. Mandatory Ten-Digit Dialing

**Mandatory ten-digit dialing on all home area code calls imposes many costs and burdens while offering little benefit as a number conservation measure.**

- **The benefits of ten-digit dialing are minimal:**
  - **Elimination of the need for "protected codes" (i.e., NXX codes identical to NPAs in contiguous geographic areas) would add only a handful of new NXXs to each NPA.**
  - **Utilization of NXX codes with a "1" or "0" as the initial digit would be difficult and costly.**
  - **Does not overcome public resistance to unfamiliar overlay NPA.**
- **The drawbacks of ten-digit dialing are substantial:**
  - **Inconvenient**
  - **Confusing**
  - **Source of additional dialing errors**
  - **Incurrence of unwanted long distance charges**
  - **Potential public safety concerns (i.e., young children and the elderly may have difficulty remembering a longer phone number)**

# VII. Charging for Number Resources

**It is premature to require carriers to pay for numbers.**

- **Any form of per-number charge should be rejected, as variations in number utilization rates result from the allocation process rather than from actions of individual providers.**
- **An allocation system based on payment for numbers would likely disadvantage new entrants, as it reflects the carriers' ability to spend money rather than the carriers' verification of need for numbers.**
- **Could actually work to encourage area code exhaust as a financial strategy by one or more LECs.**

**Payment for numbers should be deferred until all other number conservation measures have been implemented.**

# VIII. "Carrier Choice"

**The "carrier choice" approach will be neither effective nor feasible, and should not be pursued**

- **Given the combined effects of full NXX assignments and extreme rate center fragmentation, CLECs are not responsible for their low number utilization.**
- **ILECs will have little incentive to cooperate in any optimization solutions, and without ILEC participation most solutions will have limited effectiveness in conserving NXX codes and NPAs.**
- **"Utilization" will be difficult to define and even more difficult to audit yet both would be essential in any "carrier choice" arrangement**
- **As with proposals to charge carriers for numbers, "carrier choice" wil benefit incumbent wireline and wireless carriers and disadvantage virtually everyone else**

**The NANP is a public resource, and the same "rules of the road" must apply to all who share and use it.**

# IX. Administrative Measures

**Effective number administration can conserve number resources**

- **Carriers should be held accountable for number utilization**
- **Carriers should be constrained from stockpiling numbers over and above their short-term requirements.**
- **Number conservation has a higher priority with the public than for industry participants.**
- **Rules established by the FCC and state PUCs rather than by the industry will better balance the interests of ILECs and new entrants.**
- **The FCC and state PUCs should improve the effectiveness of the centra office code assignment guidelines**
- **Restrictions may be required as to the unrestricted use of NANP numbers by certain types of service providers.**

# IX. Administrative Measures

**States should be authorized to pursue interim solutions until the Commission adopts permanent number resource optimization policies.**

- **The interim authorizations granted on September 15 to Massachusetts, California, Florida and New York will materially expand the options available to these states for dealing with immediate numbering crises**
- **However, other states should not be required to petition the Commission and wait months for a ruling in order to pursue the same types of solutions as the Commission has authorized for these four states.**
- **The Commission should immediately amend its September 15 Orders to afford any other state the ability to adopt measures comparable to those that have been allowed for the specific petitioners.**

# IX. Administrative Measures

**The FCC should enforce specific rules and procedures for numbering administration.**

- ***Definitions of categories of number usage*** **– Adoption of a specific set of definitions will help eliminate inconsistencies, gaps and ambiguities.**
- ***Verification of need for numbers*** **– Demonstration of need in order to obtain "growth codes;" utilization thresholds determined by the states.**
- ***Reserved telephone numbers*** **– Specific guidelines regarding reserved numbers should be established**
- ***Reporting/record-keeping*** **– States should be given the authority to mandate the submission of information on number utilization**
- ***Audits*** **– The FC *and* state PUCs should have the authority to conduct comprehensive audits**
- ***Enforcement measures*** **– Adequate enforcement measures are essentia to deter squandering of numbering resources.**

# Conclusion

- Exhaust of the NANP is entirely avoidable with rapid development and implementation of effective numbering policies.
- Expansion of the NANP is an unthinkable "solution" to the current numbering situation
- States should be afforded the flexibility to address and resolve conflicting positions in the best interests of their respective communities.
- There is no single "correct" solution to the numbering crisis that wil address and resolve all possible stakeholder concerns: all possible solutions must be considered.
- FCC national guidelines should focus on broad policy goals, not specific implementation strategies.