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

In the Matter of	)	
	)	
Numbering Resource Optimization	)	CC Docket No. 99-200
	)	
Petition for Declaratory Ruling and Request For Expedited Action on the July 15, 1997 Order of the Pennsylvania Public Utility Commission Regarding Area Codes 412, 610, 215 and 717	)	CC Docket No. 96-98
	)	
Second Further Notice of Proposed Rulemaking	)	

COMMENTS OF WORLDCOM, INC.

Henry G. Hultquist
Mary De Luca
Chuck Goldfarb
1133 19th Street, N.W.
Washington, D.C. 20036
(202)736-6485

EXECUTIVE SUMMARY

WorldCom recommends that the Commission consider only those numbering resource optimization measures that address the underlying cause of stranded telephone numbers – the existing practice of assigning numbering resources to discrete geographic rate areas. Proposals to establish a so-called "market-based" allocation mechanism would do little or nothing to address the underlying causes of NXX code shortages. Nor has Congress authorized the Commission to establish such a mechanism. WorldCom recommends that the Commission direct the industry to undertake a thorough analysis of a proposal to separate rating information from NPA-NXX and thereby permit wider geographic use of telephone numbers.

The Commission should carefully circumscribe any relaxation of the rules against service- and technology-specific overlays. If the Commission decides to allow so-called "transitional overlays" it should limit this form of relief to jeopardy NPAs where the transitional overlay eliminates the need for jeopardy procedures. Only those wireless carriers that are preparing to implement local number portability ("LNP") by November 24, 2002 should be eligible to draw NXX codes from the overlay NPA. The overlay code should transition to an all-services overlay when the Pooling Administrator or a wireline carrier requires a full NXX code. Mandatory 10-digit dialing should begin either at the time when the pooling administrator or a wireline carrier requires resources from the overlay code, or by November 24, 2002, whichever is earlier.

The Commission should not adopt broad rules to withhold numbering resources from related carriers when a sister company fails to comply with mandatory reporting

requirements. Instead, the Commission should examine all relevant issues in individual enforcement proceedings before determining that withholding from related carriers is an appropriate sanction in a particular set of circumstances.

WorldCom does not oppose allowing state commissions password-protected access to the NANPA database as an enterprise service.

The Commission should allow customers to extend indefinitely number reservations if the customer pays a non-trivial recurring charge for the number reservation. Insofar as number reservations may waste numbering resources, such a policy would deter needless reservations.

Regardless of whether the Commission grants states authority to audit service providers' use of numbering resources, the Commission should establish rules to prevent service providers from being subjected to redundant audits. When a carrier's systems have been audited in any one jurisdiction, that carrier should not be subject to another audit for at least 24 months.

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COMMENTS OF WORLDCOM, INC.

I. Introduction

This Second Further Notice of Proposed Rulemaking requests comment on a variety of issues that range from the prohibition on service- and technology-specific overlays to a so-called "market-based" approach for optimizing the use of numbering resources. In these comments, WorldCom urges the Commission to focus on optimization measures that might actually address the causes of stranded numbers. The Commission should disavow once and for all the absurd notion that stranded numbers are caused by the wasteful practices of individual service providers bent on accumulating massive inventories of useless telephone numbers. The "shortage" of central office codes that afflicts many NPAs was not caused by carrier inefficiencies. The creation of a

"market" to allocate numbering resources would not address the underlying causes of those shortages.

The Commission should instead evaluate optimization measures that directly address the rate center problem. In these comments WorldCom describes one such possible measure – divorcing rating intelligence from NPA-NXX. We call this potential optimization measure "transparent numbers," and recommend that the Commission direct the industry to evaluate thoroughly the costs and benefits of such numbers. We also recommend that the Commission carefully limit any relaxation of the prohibition against service- and technology-specific overlays to protect the pro-competitive goals served by that prohibition.

II. The Commission should place strict limits on the use of transitional overlays.

In the Second Further Notice, the Commission asks a series of questions that revisit the prohibition against service-specific and technology-specific area code overlays.[1] In particular, the questions focus on "transitional overlays." A transitional overlay is described as a phased-in form of area code relief in which an overlay NPA is initially introduced only to serve non-LNP-capable carriers.[2] At a later date, the overlay transitions to an all-services overlay. Mandatory 10-digit dialing does not coincide with the introduction of the NPA, but instead occurs at some later date.

At the outset, WorldCom agrees with the Commission that the anti-competitive, anti-conservation implications of permanent service- and technology-specific overlays

[1] ¶ 128 *et. seq.*
[2] ¶ 130.

are so significant that such forms of area code relief should never be countenanced.[3] It is even difficult to make an argument that a transitional overlay would provide benefits to competition or efficiency. Nonetheless, the Commission may determine that allowing state commissions some discretion to implement transitional overlays would, for whatever reason, make it easier for those bodies to authorize needed relief. Such discretion must be prudently circumscribed to ensure that consumers and service providers obtain the benefits provided by competition and numbering optimization.

WorldCom recommends that the Commission place several parameters around the use of transitional overlays. First, upon implementation of a transitional overlay, all jeopardy rationing procedures should terminate. If the transitional overlay is insufficient to eliminate the need for jeopardy procedures, then the state commission must be required to provide relief for all service providers. Otherwise, some service providers will inevitably have superior access to numbering resources in violation of the Communications Act and the Commission's rules.[4]

The Commission explicitly should not extend previous delegations of authority for post-relief rationing to transitional overlays. Insofar as it makes any sense to authorize transitional overlays, such overlays should completely eliminate the need for rationing and lotteries.

The Commission should underscore its continued opposition to permanent service- and technology-specific overlays by explicitly prohibiting states from later seeking to convert a transitional overlay to more permanent status, and then implementing additional relief in the underlying NPA. Such action would damage

[3] *See, e.g.*, ¶ 129.
[4] *See, e.g.*, 47 U.S.C. § 251(e)(1).

numbering optimization and competition. It must be clear that transitional overlays are intended to serve as a bridge to, not a detour around, comprehensive area code relief.

The Commission should not allow non-LNP-capable wireline carriers to draw NXX codes from transitional overlays. Transitional overlays should be available only for CMRS providers that are preparing to implement LNP. Otherwise, the overlay is in fact an all-services overlay that entails mandatory 10-digit dialing.

The Commission's rules should require that if a transitional overlay is ordered to span multiple NPAs, then it is understood that ultimately all of those NPAs will be relieved by that overlay. The Commission should prohibit state commissions from later adopting different relief for one or more of the original NPAs. The Commission should keep in mind that although CMRS providers will be pooling-capable by November 24, 2002, technical problems will continue to prevent wireline providers from being able to port/pool wireless numbers. Thus, a transitional overlay will risk the needless stranding of numbers unless that overlay is ultimately available to all service providers throughout the entire geographic area that it covers.

Transitional overlays should be allowed only in jeopardy NPAs that have implemented thousands block pooling, where the transitional overlay will eliminate the need for jeopardy procedures. There is no need to adopt an arbitrary trigger for the transition to an all-services overlay. Instead, the Commission should simply require that the Pooling Administrator and service providers have unrestricted access to NXX codes for pool replenishment, LRN establishment, or to serve the needs of large customers. When the original NPA no longer has sufficient resources for these purposes, the transition must occur.

There must be a deadline for the beginning of mandatory 10-digit dialing. A deadline will mitigate the anti-competitive effects of relaxing this important rule. WorldCom recommends that the Commission adopt the earlier of the date when the code transitions to an all-services overlay, or November 24, 2002.

At some point in time, an LNP-capable carrier may require an entire NXX (e.g., to establish its LRN or serve a large customer) despite the fact that no NXXs remain in the original NPA. The Commission should not allow states to prohibit such carriers from drawing an NXX from the overlay code. Instead, the Commission should require that such a need trigger the transition to an all-services overlay with mandatory 10-digit dialing.

The Commission should not allow the use of transitional overlays other than for non-LNP-capable carriers as described above. Nor should the Commission allow the establishment of longer-term overlays for particular services such as unified messaging. Such service-specific NPAs are more likely to strand numbers than to improve the efficiency with which numbers are utilized. The Commission should instead investigate whether such services can in fact improve the utilization of traditional NPAs by using numbers that might otherwise be stranded. Seen in the most favorable light, service- and technology-specific overlays, including transitional overlays, are second-best forms of relief. Ordinary geographic splits and all-services overlays will in almost every instance provide demonstrably more effective, pro-competitive relief.

III. Transparent numbers may provide a cost-effective solution to the rate center problem.

For several reasons, it is important to decide at the earliest possible date how NANP expansion should occur. But it may also be useful to defer such expansion for as long as possible. Deferral of expansion makes it less costly in two ways. First, deferral of any expense decreases the net present value of the associated costs. Second, delay of NANP expansion decreases the cost of that expansion whenever it occurs by allowing as part of ordinary network upgrades the deployment of equipment and software compatible with the expanded NANP. Thus, a prompt decision on the manner in which NANP expansion should occur combined with the cost-effective deferral of NANP expansion will minimize the costs of changes required to accommodate longer end-user network addresses.

As should be apparent to all observers, the primary cause of stranded telephone numbers is the association between rate areas and NXX codes, along with the importance of rating information for toll services and inter-carrier compensation. Each wireline carrier requires at least one code or block for every rate area in which it offers service, regardless of the actual demand for its services within those rate areas. The disparity between the minimum assignment and actual demand strands individual telephone numbers.

We use the term "transparent" to describe numbers that have no rating or routing intelligence. It is analogous to the LNP environment in which the NPA-NXX of a telephone number no longer can be relied on to identify its serving switch within the rate area. With transparent numbers, separate signaling information would carry rate area intelligence, just as it is required today to indicate the serving office for a ported number.

The use of transparent numbers would not impact the rate area paradigm. The transparent number simply changes the source of the associated rate area information.

The network capabilities required to support transparent numbers are described by the term "geographic number portability." However, geographic number portability was conceived to allow a customer to keep his or her telephone number when changing service providers *and* moving beyond the rate area associated with that number. We use the term "transparent numbers" to reflect a broader use of geographic number portability technology, to include its use for telephone numbers available for assignment.

Because a transparent number has no geographic significance, stranded numbers can be used in rate areas where they are needed instead of being tied to the rate area associated with their NPA-NXX. This would permit improved number utilization and consequently defer NANP exhaust. Thus, transparent numbers could achieve the conservation benefits of rate center consolidation while avoiding the need for revenue adjustments. The transparent number approach recovers stranded numbers left untouched by thousands block pooling or even ITN porting/pooling.

The use of transparent numbers solves another problem unrelated to number conservation – it enables unfettered porting from mobile networks to landline networks. Because the wireless industry does not require NPA-NXX rate area associations based on their customers' residence or business locations, it is likely that a wireless customer seeking to port to a landline network provider would often have a telephone number with the "wrong" rate area. That is, the NPA-NXX of the customer's telephone number often would not correspond to the rate area in which the customer's landline service would be

located. With transparent numbers, this issue disappears. Thus, transparent numbers would create reciprocity to porting between wireless and landline networks.

The transparent number approach would have numerous impacts. Network and OSS architectures would be affected. A new data field to indicate a telephone number's rate area would have to be added to NPAC and related LNP database systems' ported number records, to inter-office common channel signaling protocol, and to billing records created during call processing. Changes to switch design would be needed to enable use of the new rate area indicator field for call typing (local/toll route selection) and for deciding whether to route based on CIC versus based on dialed number (or LRN), as well as changes in call processing to do LNP database queries sooner and to interact with the expanded signaling protocol. Service providers' OSS would also require changes since billing logic would look for rate area information in a new field and, if not already implemented, so non-native numbers could be placed in a switch's inventory of numbers available for assignment. Administrative costs would be incurred for new switch translations, added service order entries, etc., because a telephone number's NPA-NXX would no longer be a reliable indicator of its rate area association.

The introduction of transparent numbers would have at least two favorable customer impacts. One, of course, is the delay in having to deal with an expanded NANP. And the other is gaining the ability to move beyond one's current rate area without having to obtain cumbersome loop extension or call forwarding arrangements. The loss of geographical significance might be viewed as a disadvantage by some customers, however.

Before a cost-benefit analysis can be completed, there should be some agreement on how the transparent number/geographic number portability technology would work and when the NANP is likely to exhaust with implementation of thousands block pooling. Technical requirements work for transparent numbers would involve network (switch/signaling/SCP) requirements work in ATIS T1S1.6, NPAC requirements work in the NANC LNPA-WG, and service provider systems (SOA/LSMS/SCP/OSS) requirements work by individual vendors and service providers. The Commission should direct the industry to undertake a thorough analysis of implementing transparent numbers to sever the connection between number assignment and call rating and routing. That analysis should, at a minimum, consider the following questions: When will the NANP exhaust if no further conservation methods are introduced? When will the NANP exhaust if only transparent numbers are introduced? What will it cost to introduce transparent numbers?

IV. The Commission should not establish broad rules to withhold numbering resources from related companies.

While there may be circumstances in which it is appropriate to withhold numbering resources from parent or sister companies when a subsidiary is subject to withholding for failure to comply with mandatory reporting requirements, there are undoubtedly other circumstances where withholding would be inappropriate. The determination to withhold from related carriers is likely to be highly fact-specific. In many cases, it is simply impossible to determine in advance whether withholding from a related carrier is appropriate. Accordingly, the Commission should not establish rules to require mandatory withholding for related carriers. It should instead address this problem

in the context of individual enforcement proceedings. The Commission may wish to establish certain guidelines to govern such proceedings.

First, only carriers operating within the same state as the offending carrier should be affected. It makes little sense to withhold numbering resources in a state for which all corporate subsidiaries have complied with the Commission's rules because one subsidiary is out of compliance for another state. Such a rule would myopically harm consumers in the state where no violation has occurred by denying them their choice of service providers.

Second, the Commission must be sensitive to a number of circumstances that would make withholding an inappropriate sanction. For example, it may take some time to integrate the operations of a recently acquired subsidiary. In such circumstances the Commission should allow related companies sufficient time to remedy any deficiencies in the OSS of the recent acquisition before adopting so severe a sanction as withholding numbering resources. This example demonstrates that the inquiry to determine whether withholding may be appropriate, is highly fact-specific.

V. State commission access to information.

WorldCom does not, in principle, oppose allowing states password-protected access to information in the NANPA's database. This should be treated as an enterprise service if the NANPA incurs additional costs to provide such access. Should the FCC decide to provide states with password-protected access to the data received by NANPA, the process must guarantee the confidentiality of company specific data.

VI. Fees for reserved numbers.

WorldCom supports allowing unlimited number reservations for customers willing to pay a non-trivial, recurring charge to their service provider for the reservation. Such charges will deter needless, or even fraudulent number reservations. The self-interest of end users in minimizing their costs will ensure that only bona fide reservations are maintained. Charging fees to carriers would be administratively burdensome and would undoubtedly result in fees to end users anyway. So the Commission should eschew this option and instead simply set a floor for the level of the necessary recurring charge. If a customer is willing to pay a non-trivial recurring charge indefinitely, there is no reason to place a time limit on number reservations. Given the requirement to meet the utilization threshold for growth resources, the service provider already has an incentive to avoid inefficient number reservations.

VII. Enforcement and audits.

If the Commission decides to grant state commissions independent authority to conduct audits, it should also establish rules to prevent carriers from being subjected to needlessly redundant audits. The audit should examine a carrier's systems to determine whether those systems ensure compliance with the Commission's rules. When a carrier's systems have been found satisfactory, that carrier should not be subject to additional audits by federal or state auditors for a minimum period of 24 months. WorldCom has implemented nationwide numbering policies and systems. An audit in any one state can suffice to determine whether or not those systems are in compliance with the Commission's rules.

VIII. The Commission lacks the authority to adopt a "market-based" allocation mechanism.

The Commission's misguided suggestion that there may be a "market-based" solution to the shortage of central office codes that afflicts some NPAs, founders on the complete absence of Commission authority to adopt such a system. The Communications Act requires the Commission, *inter alia*, to ensure that telephone numbers are made available on an equitable basis.[5] Since some service providers already hold substantial number inventories, the Commission cannot auction new numbering resources in compliance with this statutory requirement. It cannot be equitable to force one group of service providers to purchase something that another group received for free.

For the same reason, the Commission cannot establish a secondary market for numbering resources. Such a market would inevitably enrich one group of carriers, those that already have numbers, at the expense of another group. There would be nothing equitable about such an arrangement.

Nor can the Commission cure these defects by seeking to charge service providers for numbers which they have previously received. Since such numbers have already been assigned, they cannot be auctioned. Instead, their price would have to be established by some administrative mechanism. The Commission has already recognized the defects of such mechanisms. Moreover, the service provider holding the numbers would have little choice but to pay whatever price was established, since to do otherwise would entail depriving customers of in-service telephone numbers. This absence of choice is

[5] 47 U.S.C. § 251(e)(1).

inconsistent with the idea of a market. Since service providers seeking to purchase new resources could decline to pay an exorbitant price for numbers, while a carrier with an existing inventory could not, such a mechanism would violate the statutory requirement that numbers be made available on an equitable basis.

Finally, the Commission cannot adopt an auction mechanism for numbering resources without explicit statutory authority. Such a mechanism would be a radical departure from long-standing practices that only Congress can authorize. Indeed, where Congress intended to give the Commission the authority to conduct auctions, it did so explicitly. It is absurd to think that with respect to numbering resources, Congress did so *sub silentio*.

The suggestion that the Commission and state commissions might conspire to ration NPA and NXX codes so as to achieve a pre-determined NANP life is ludicrous. The other NANP member countries would undoubtedly object to any suggestion that the life of the NANP could be determined thus. Moreover, long-term rationing would plainly violate the statutory requirement that numbers be made available in an equitable manner. Insofar as such rationing would raise an entry barrier for new service providers, it would also conflict with a host of statutory provisions that seek to open local telecommunications markets to competition.

IX. A "market-based" allocation mechanism would not address the underlying causes of stranded telephone numbers.

The fundamental problem with the Commission's proposal to establish a market-based allocation mechanism for numbering resources is that no such mechanism would address the real cause of NXX code shortages. The Commission has recognized that

"one of the major contributing factors to numbering resource exhaust is the existence of multiple rate centers in each NPA and the demand by most carriers to have numbering resources in each rate center in which they operate."[6] Indeed, there is much evidence that the current system of tying NXX codes to a multitude of rate centers is the *primary* cause of stranded telephone numbers.

At the same time, the Commission has also stated "that the lack of efficiency in carrier utilization of numbers may be in part due to the failure of existing allocation rules to recognize the economic value of numbers ... and that efficient utilization will be better achieved if carriers pay a fee for numbering resources that is closely related to the supply and demand for numbers in a specific market."[7] Thus, the Commission proposes charging for numbers "to provide incentives for carriers to take and retain only as many numbers as they need, in the short run, to provide service to their customers."[8] The Commission has sought comment on all sorts of detailed implementation issues involving primary and secondary markets associated with a market-based allocation system.

But, in so doing, the Commission is putting the cart before the horse. The primary cause of number exhaust is the current rate center system, *which imposes on all carriers the need for an unnecessarily and inefficiently large amount of numbers*. It is *not* individual carriers, in the absence of a pricing mechanism, inefficiently taking and retaining many more numbers than they need. The Commission fails to explore how the root cause of the stranded number problem – the current rate center system that forces each local exchange carrier to obtain separate blocks of numbers for each rate center in

[6] ¶ 144.

[7] ¶¶ 161-162.

which it does business – would be improved by a charge for numbers.[9] As WorldCom already has explained in this proceeding,

> Unless the market mechanism established for the use of numbering resources creates a nexus between revenues derived from maintaining a large number of rate centers and the cost of practices that result in an inefficient use of numbers, the Commission's objective in proposing the establishment of a market for numbering resources may not be realized. It is not clear that simply charging for the use of numbers would create such a nexus.[10]

Moreover, even if a pricing mechanism could indirectly create incentives for all carriers to address the rate center issue in a manner that increased efficient number usage, how quickly could it do so and are there faster and more direct ways to address the problem? Indeed, given the deployment of new technologies and various market trends that reduce both the technical need for multiple rate centers and the incentive to maintain multiple rate centers – e.g., local number portability, telecommunications costs becoming less and less distance sensitive, the trend toward service offerings consisting of bundles of local and long distance telecommunications services as well as non-telecommunications services available at a single rate for a fixed blocks of minutes or bandwidth – is it possible that the industry, with some impetus from the Commission and its state counterparts, might be willing and able to address the rate center issue before a pricing mechanism would have any impact? These are important questions that must be addressed up-front because implementing a pricing mechanism for numbers will be both

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[8] ¶ 161.

[9] There may be a good public policy reason to charge for numbers other than to more efficiently allocate resources. For example, charging for numbers might be an efficient and competitively neutral way to fund the federal universal service subsidy.

[10] *In the Matter of Numbering Resource Optimization*, Further Notice of Proposed Rulemaking (rel. March 31, 2000), Comments of WorldCom, Inc. (filed May 19, 2000) ("WorldCom Comments") at 8.

difficult and costly. There already is significant evidence describing the daunting difficulties associated with implementing a pricing mechanism, particularly the core difficulty that with local number portability any carrier that pays for a number would lose that number if its customer migrated to another carrier.[11] The lack of permanence would make it difficult for carriers to place a value upon the number resource. There also is substantial record evidence about how difficult it would be to implement a pricing mechanism that would be competitively neutral, especially in light of the requirements imposed on small carriers to obtain blocks of numbers in all rate centers in which they intend to provide service.[12]

WorldCom already has described the limited impact that a pricing mechanism is likely to have with respect to more efficient number utilization.[13] As WorldCom explained:

> . . . a primary objective of the mechanism should be to provide incentives to reduce the inefficiencies resulting from the needless maintenance of rate centers with small numbers of lines.
>
> As the cost of transport has declined in recent years, the incumbent LECs have been consolidating central office switches, replacing switches in smaller communities with remote switch modules, and serving larger and larger areas with a single central office switch. While this has eliminated the need for separate NXX codes in many communities to perform the *routing* function of the NXX code, separate NXX codes nevertheless have been preserved in order to maintain the *rating* function of the NXX code. If NXX codes had been consolidated at the same time that central office switches were consolidated, a significant source of inefficiency in the use of numbering resources would have been eliminated. The incumbent LECs, however, had little incentive to conserve numbers and every incentive to maintain the separate rate centers. Even though the distance-sensitivity of telecommunications costs has become largely a fiction, the

[11] WorldCom Comments at 5-8.

[12] WorldCom Comments at 8-12 and 17-18.

[13] WorldCom Comments at 13-17.

> combination of two rate centers into one would, in many cases, convert what had been a toll call into a local call, thus threatening the revenues of the incumbent LEC.[14]

The Commission therefore should step back and ask the fundamental public policy questions that require answers before embarking on the detailed implementation of a pricing mechanism for numbers. Would such a pricing mechanism affect rate center issues in a timely fashion? There is no evidence that it would. At the same time, are there technological and market forces already at work that are likely to change the incentives of all parties to reach a mutually beneficial solution? This latter question must be broached with the proper time horizon. After all, it would take a significant amount of time, surely to be reckoned in years not months, to implement a pricing mechanism for numbers, and therefore it is appropriate to contemplate how these market trends will affect the need to maintain multiple rate centers several years in the future. Is it likely that three years from now Internet telephony will have revolutionized how services are offered and rates set? Indeed, will Internet telephony change demand for telephone numbers sufficiently to confound any prediction made today?

The so-called "market-based" allocation schemes suggested by the Commission would do little to address the underlying causes of stranded telephone numbers. Such schemes might address carrier inefficiencies, but not the rate center structure itself. The Commission must focus on optimization measures that actually address the causes of stranded numbers.

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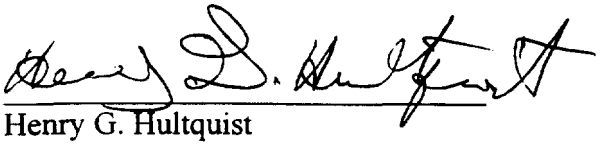
[14] WorldCom Comments at 14, footnotes omitted, emphasis in original.

Respectfully submitted,

WorldCom, Inc.



Henry G. Hultquist
Mary De Luca
Chuck Goldfarb
1133 19th Street, N.W.
Washington, D.C. 20036
(202)736-6485

CERTIFICATE OF SERVICE

Vivian Lee, do hereby certify that copies of the foregoingSecond Further Notice of Pro ulemaking of WorldCom, Inc. were sent via first class mail, postage paid, to the foll on the 14th day of February 2001.

Jorc ldstein*
Fed ommunications Commission
445 Street, SW
Was on, DC 20554

Dee ietler*
Fed ommunications Commission
445 Street, SW
Was on, DC 20554

Kyl on*
Fed ommunications Commission
445 Street, SW
Was on, DC 20554

Reb Beynon*
Fed ommunications Commission
445 Street, SW
Was on, DC 20554

Chr er Wright*
Ger Counsel
Fed Communications Commission
44 Street, SW
W ngton, DC 20554

Dc Attwood
Cl ommon Carrier Bureau
Fe Communications Commission
44 Street, SW
W ton, DC 20554

Chuck Keller*
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Aaron Goldberg*
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Yog Varma*
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Al McCloud*
Network Services Division
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Blaise Scinto*
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Sanford Williams
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Jared Carlson*
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Diane Harmon*
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Cheryl Callahan*
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Les Selzer*
Common Carrier Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

International Transcription Service*
1231 20th Street, NW
Washington, DC 20036

Cynthia B. Miller
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399

Hope Thurrott
Alfred G. Richter
SBC Communications Inc.
1401 I Street NW, 11th Floor
Washington, DC 20005

Jodi Bair
Attorney General's Office
Public Utilities Section
180 E. Broad Street
Columbus, OH 43215

Trina M. Bragdon
Maine Public Utilities Commission
242 State Street
State House Station 18
Augusta, ME 04333

Helen M. Mickiewicz
Peter Arth, Jr.
Helen M. Mickiewicz
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Louise M. Tucker
Telcordia Technologies, Inc.
2020 K Street NW, Suite 400
Washington, DC 20006

Michael S. Slomin
Telcordia Technologies, Inc.
445 South Street, MCC-1J130R
Morristown, NJ 07960

Judith St. Ledger-Roty
Rebekah J. Kinnett
Kelley Drye & Warren
1200 19th Street, NW, Suite 500
Washington, DC 20036

Robert L. Hoggarth
Harold Salters
Personal Communications Industry Assn.
500 Montgomery Street, Suite 700
Alexandria, VA 22314

Benjamin H. Dickens, Jr.
Gerard J. Duffy
Michael B. Adams, Jr.
Blooston, Mordkofsky, Jackson & Dickens
2120 L Street, NW, Suite 300
Washington, DC 20037

Jeffery S. Linder
Daniel J. Smith
Wiley, Rein & Fielding
1776 K Street, NW
Washington, DC 20006

Jeri A. Serner
ACUTA
152 W. Zandale Drive, Suite 200
Kexington, KY 40503

Teressa K. Gaugler
Jonathan M. Askin
ALTS
888 17th Street, NW, Suite 900
Washington, DC 20006

Mark C. Rosenblum
Roy E. Hoffinger
AT&T
Room 1130M1
295 North Maple Avenue
Basking Ridge, NJ 07920

M. Robert Sutherland
Angela N. Brown
BellSouth Corporation
1155 Peachtreet Street, NE
Altanta, GA 30309

Lawrence E. Sarjeant
Linda L. Kent
Keith Townsend
USTA
1401 H Street, NW, Suite 600
Washington, DC 20005

Danny E. Adams
Todd D. Daubert
Kelley Drye & Warren
1200 19th Street, NW, Suite 500
Washington, DC 20036

Russell C. Merbeth
Rose Breidenbaugh
Winstar Communications, Inc.
1615 L Street, NW, Suite 1260
Washington, DC 20036

Michael D. McVicker
Telecommunication Services Division
Department of Information Services
Olympia, WA 98504

Jonathan Chambers
Sprint PCS
401 9th Street, NW, Suite 400
Washington, DC 20004

Joseph Assenzo
Sprint PCS
4900 Main Street, 11th Floor
Kansas City, MO 64112

Kathryn Marie Krause
Qwest Corporation
1020 19th Street, NW, Suite 700
Washington, DC 20036

John M. Goodman
Verizon
1300 I Street, NW
Washington, DC 20005

Brian Thomas O'Connor
Robert A. Calaff
VoiceStream Wireless Corporation
1300 Pennsylvania Avenue, NW, Suite 700
Washington, DC 20004

Lawence G. Malone
Public Service Commission of New York
Three Emprie State Plaza
Albany, NY 12223

Deanne M. Brutts
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105

Richard Askoff
National Exchange Carrier Assn. Inc.
80 South Jefferson Road
Whippany, NJ 07981

L. Marie Guillory
Daniel Mitchell
National Telephone Cooperative Assn.
4121 Wilson Blvd., 10th Floor
Arlington, VA 22203

Marc D. Poston
Missouri Public Service Commission
301 West High Street, Room 750
Jefferson City, MO 65101

Teya M. Penniman
Oregon Public Utility Commission
550 Capitol Street NE
Salem, OR 97310

Joel H. Cheskis
Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101

Michael F. Altschul
Cellular Telecommunications Industry
1250 Connecticut Avenue, NW, Suite 800
Washington, DC 20036

Andre J. Lachance
GTE Service Corporation
600 Hidden Ridge, HQE03127
P.O. Box 152092
Irving, TX 75015

Robert S. Foosane
Laura L.Hollowayr
James B. Goldstein
Nextel Communications, Inc.
2001 Edmund Halley Drive
Reston, VA 20191

*HAND DELIVERED

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Vivian Lee