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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D C 20554

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In the Matter of)
)
Telephone Number Portability) CC Docket No. 95-116
) RM 8535

COMMENTS OF PCS PRIMECO, L.P.

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TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| I. INTRODUCTION AND SUMMARY | 1 |
| II. MARKET DEMAND FOR PORTABLE NUMBERS | 3 |
| III. PROBLEMS IN CREATING A NUMBER PORTABILITY SYSTEM | 5 |
| IV. DEVELOPMENT OF A SYSTEM FOR NUMBER PORTABILITY | 8 |
| V. ROLE OF THE FCC | 9 |
| VI. CONCLUSION | 11 |

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PCS PrimeCo, L.P. ("PrimeCo")¹ offers the following comments on the Commission's proposed rule making for number portability

I. INTRODUCTION AND SUMMARY.

PrimeCo urges the Commission to lead the development of a coherent national policy for number portability. In PrimeCo's view, the development of a system of service provider portability should have first priority because its benefit to consumers will likely outweigh the costs of development and implementation. By contrast, location portability on a national scale does not appear, at this time and, in the context of the current numbering system, to offer consumers benefits sufficient to outweigh the complexity and expense of installing such a system nationwide. PrimeCo urges the Commission to proceed carefully and to allow the telecommunications industry to investigate the demand for and the costs of various solutions to the problem of providing number portability. Industry participation in this area is critical.

Because number portability will carry high capital and operational costs as well as daunting technical hurdles, the involvement of all telecommunications providers in the es-

¹ PrimeCo was recently granted PCS licenses for eleven block A/B MTA markets.

establishment of national guidelines to support number portability is essential if costs are to be minimized. To date, architecture trials for number portability have had limited involvement from wireless carriers, making it difficult for the wireless industry to assess the actual network impacts for key issues like the use of a centralized database, trigger location, geographic area impact, and equipment cost identification. PrimeCo therefore urges that any further tests in this area explicitly address the involvement of wireless networks.

For about fifty years, the North American Numbering Plan (“NANP”)² has made telephone numbers available through a uniform numbering plan that assigns each telephone a unique address. However, the rapid changes that have occurred in telecommunications over the past decade have created strains in the NANP that could not have been foreseen when AT&T began developing the system in the 1940’s. For one thing, the explosion of telecommunications devices like facsimile machines, pagers, modems, and wireless communication devices has led to a threatened “exhaustion” of telephone numbers under the current system of assignment. In addition, the changing environment in which telecommunications services are offered to the public has raised questions about some of the assumptions on which the NANP was based. Among those assumptions was the idea of associating telephone numbers with specific geographic areas and service providers.

² The NANP associates a ten-digit telephone number with a specific geographic location and a specific switching entity. The first three digits of the telephone number (the “numbering plan area” or “NPA”) identify a geographic area within a state or province. The next three numbers (or “NXX”) identify the switching entity, which is usually a central office. The last four numbers identify the telephone customer’s line. Aside from the United States and Canada, the NANP also includes: Anguilla; Antigua and Barbuda; Commonwealth of the Bahamas; Barbados; Bermuda; British Virgin Islands; Cayman Islands; Dominican Republic; Grenada; Jamaica; Montserrat; Saint Kitts and Nevis; Saint Lucia and the Grenadines; Trinidad and Tobago; and, Turks and Caicos. See, *In the Matter of Administration of the North American Numbering Plan*, Report and Order, FCC Docket No. 92-237 (July 13, 1995) at ¶ 3 (hereafter “NANP Order”).

In an era when mobile communications were confined to a handful of Improved Mobile Telephone Service ("IMTS") subscribers, and telephone service was generally provided by a single, vertically integrated company, the notion of reaching a customer anywhere by dialing his home number would certainly have seemed as far-fetched as the idea of a competitive telecommunications market. Today, tens of millions of Americans have mobile communications devices of varying kinds, and new service providers compete with existing carriers to satisfy the growing demand for new and better telecommunications services. As a result, many telecommunications consumers appear to want the convenience and flexibility that comes with the ability to "take" their telephone numbers with them when they move or when they change service providers. To provide consumers with "portable" telephone numbers, however, is a complex undertaking that will require the participation of the entire telecommunications industry and the Federal Communications Commission.

II. MARKET DEMAND FOR PORTABLE NUMBERS.

As competition in the local market increases, customers who desire to change from one telecommunications services provider to another would almost certainly have to change telephone numbers under the current system. For a business, changing a telephone number entails considerable expense and disruption in operations, in printing new stationery and other business materials as well as costs associated with its customers and vendors learning and using the new number. For residential customers, a change in telephone number is also inconvenient and involves disruption and some expense. Because of the inconvenience and expense associated with a number change, many consumers may decide

that the benefits of changing carriers are outweighed by the costs of changing telephone numbers. As the notice of proposed rule making observes, "number portability appears to offer substantial public interest benefits because it provides consumers personal mobility and flexibility in the way they use their telecommunications services, and because it fosters competition among service providers."³ For these reasons, PrimeCo supports the adoption of a system of service provider portability

While the advantages of service provider portability are relatively easy to see, the benefits of a nationwide location portability scheme are less evident.⁴ First, location portability on a national scale seems unlikely to stimulate competition to the degree that service portability would. For example, customers moving from one coast to another expect to change telephone numbers and do not base the decision to move on the inconvenience of the changed telephone number or the relative merits of the telecommunications providers involved.⁵ Second, implementation of a system that permits the porting of numbers from one coast to another is technically more difficult and financially more burdensome than implementing a number portability system within a more limited geographic area. Finally, disassociating a telephone number entirely from a geographic location seems likely to confuse customers about what is or is not a local call and to make it difficult for them to control their telecommunications expense. Thus, at the present time and in present cir-

³ *In the Matter of Telephone Number Portability*, CC Docket No. 95-116, RM 8535 (July 13, 1995) at ¶ 4 (hereafter "*Number Portability NPRM*").

⁴ Implementation of service provider portability within some defined geographic area such as an NPA should also make location portability possible within that same area. Within such a limited geographic area, there may well be greater demand for location portability of telephone numbers than appears to exist at the national level. Businesses, for example, would be able to change location without the need of changing telephone numbers. Callers would still associate the NPA with a specific (though broader) area, giving them the ability to recognize when a call is long distance.

⁵ But, as noted above, maintaining the same telephone number when moving within some "local" area may be viewed differently by some firms

cumstances, the benefits of nationwide location portability do not seem to outweigh its costs.⁶

III. PROBLEMS IN CREATING A NUMBER PORTABILITY SYSTEM.

For wireless carriers, the problems associated with the provision of number portability are generally similar to the difficulties faced by landline carriers in implementing a system for porting numbers. For example, because telephone numbers are associated with specific locations, calls are routed and rated for billing purposes based upon the locations of the originating and terminating switching offices. A system that uncouples telephone numbers from geographic locations must therefore have a means of routing calls to their proper destination and a way to rate the calls so the carriers involved can collect their charges. Creation of such a system will be cost intensive; it will increase processing requirements and will demand hardware and software changes to support it. Furthermore, as the number of database look-ups increases for purposes of call setup, billing, fraud control, roaming, and routing, the processing time for wireless calls will also increase. Hence, the design of an efficient number portability system needs to account for the processing times already involved in completing a wireless call.

In addition to any changes in a wireless network's architecture that may be required to implement number portability, modifications to the current switching require-

⁶ Wireless carriers now provide some degree of location portability to mobile customers through roaming arrangements that permit customers to be called over wide, multi-state areas by dialing a mobile subscriber's 10-digit telephone number. These are, however, temporary services for which premium rates are generally charged. A cellular customer who moves permanently to a new location can be expected to change his mobile telephone number if for no other reason than to avoid "roaming" charges.

PrimeCo expects that wide-area or even nationwide location portability may take on greater significance over time, but it takes a skeptical view of the demand for provision of a "lifetime telephone number" service at this time.

ments will also be needed should 10-digit dialing become the standard dialing plan.⁷ The mobile switching center's (MSC) mobile station analysis table currently relies upon seven-digit screening, which will have to be increased to accommodate 10-digit screening.

The differences in wireless and wireline calling boundaries present additional difficulties. Many of the number portability proposals that have been advanced so far tend to focus on NPAs as the relevant area within which to offer service provider portability. Wireless serving areas - MSAs, RSAs, MTAs, and BTAs - more often than not overlap or lie within two or more NPAs. These differences in serving areas will have to be reconciled if wireless systems are to be capable of supporting number portability.

Several parties have proposed solutions for number portability.⁸ Certain limitations are apparent in these various proposals. For example, the MCI Metro proposal allows customers to keep their telephone numbers when changing service providers within a defined geographic area. MCI's plan creates a database that enables a carrier to "look up" an NXX-XXXX to determine a "carrier code" for terminating the call. The carrier delivering the call would then route it to the customer's carrier for completion. This plan accommodates a customer's move from one carrier to another without a number change, but it limits geographic number portability when moving from one NPA (or whatever area is served by the database) to another. Moreover, as the Commission notes, this plan seems to rely on the use of two NPA codes for its operation.⁹ Given the current problem of number exhaustion, the wide-spread use of this system is not feasible under the existing

⁷ Ten-digit dialing would likely become standard in a system supporting nationwide location portability.

⁸ MCI Metro, AT&T, and GTE. Another proposal ("the Seattle trial") was developed by Stratus Computer and U.S. Intelco. *Number portability NPRM* at ¶ 36 *et seq.*

⁹ *Number portability NPRM* at ¶ 36.

NANP. Furthermore, from PrimeCo's point of view, the MCI system burdens the interexchange carrier with the reroute function in the case of calls entering the NPA. PrimeCo prefers the "N-1" approach¹⁰ because it tends to require the involvement of the entire telecommunications industry. This level of involvement should increase commitment to the process and produce greater uniformity of operation.

AT&T's proposal uses advanced intelligent network ("AIN") capabilities to reroute a call. Under the AT&T plan, a called number look-up could take place at an intelligent service control point ("ISCP"), without the need to substitute a new "carrier code" as required in the MCI proposal. This plan saves on NPA codes and appears to offer complete geographic portability. However, it appears costly inasmuch as it seems to require ISCP pairs in each metropolitan area.

The Seattle trial maps the customer's telephone number (that is, the dialed number) to a network node address (or the present geographic location of the customer). This permits geographic and service provider portability of the customer's telephone number. However, widespread use of this system would require every participating telephone user to have two numbers: the number people call to reach the subscriber and another number the network uses to route the call to the customer's present location. As with the MCI proposal, this appears impractical within the current limitations of the NANP.

Finally, GTE proposes requiring customers who want number portability to make a one-time change to a 700 number. This approach, however, is not a long-term solution to the problem of number portability since it is inherently limited to 10 million numbers.¹¹

¹⁰ The N-1 approach requires the carrier immediately preceding the terminating carrier to perform the database query. *Id.* at ¶ 46.

¹¹ There are more than 20 million cellular subscribers alone.

IV. DEVELOPMENT OF A SYSTEM FOR NUMBER PORTABILITY.

The development and implementation of a system for number portability will, in PrimeCo's view, require the creation of uniform national standards and the participation of all telecommunications providers. A Balkanized system will inevitably result in operational differences that, if they do not defeat outright the purpose of a number portability system, will certainly impose greater cost upon it. In addition, it is important that the system agreed upon permits other features (like calling party pays, alternate billing arrangements, or other service features) to follow the customer and coexist within the network. Permitting local variations of number portability could deprive customers who move or change vendors of some of the service features they have chosen. Moreover, if the purpose of number portability is to foster greater competition in the market and to give consumers convenience and flexibility in changing locations or vendors, then uniformity and universality are essential features of the system.

Number administration in a number portability system will have to be centrally managed. Today, telecommunications services providers manage the telephone numbers associated with the NXXs assigned their switches. If, however, a telephone number becomes portable from one provider's switch to another's, it is unclear in that setting who would have the administrative responsibility for that number and who retains and reassigns that number if the customer disconnects service altogether. This suggests that number administration should be centralized in a fashion similar to the existing 800 database process, since lack of central administration would require each switch to maintain a large database for look-ups to assure that calls are routed to the correct service provider and to

the proper location. In short, a decentralized system would require every customer's change of location and service provider to be identified in every switch; this approach would produce prohibitive equipment and maintenance costs and could result in a lack of uniform operation of system.

V. ROLE OF THE FCC.

To identify the need for uniform, national standards and central administration of a numbering database does not, of course, address the issues of who should administer the database and how the development and maintenance of the database should be financed. These, and the fundamental issues of technology, competition, cost, and consumer demand that are at the heart of a number portability system, require a consensus from the telecommunication industry and its customers before any steps toward implementation can be undertaken. It is important that the FCC draw together all of the parties affected by a project of this magnitude and that the FCC help the interested parties reach agreement on the precise nature of the service to be created as well as the means for implementing that service. To this end, and to effectuate a workable number portability scheme, the FCC should convene an industry group comprised of all affected segments of the telecommunications industry. Participants should include, at a minimum, representatives of the following groups: local exchange carriers, interexchange change carriers, wireless operators, CATV providers, satellite carriers, competitive access providers, manufacturers, resellers of wireline and wireless services, and interested state and public utility commissions. Obviously, continued participation by the Industry Numbering Committee should also be encouraged. Indeed, given the magnitude of the project, the FCC might consider the estab-

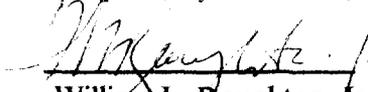
lishment of a more formal advisory committee along the lines of the Advanced Television Advisory Committee or the recently formed Public Safety Wireless Advisory Committee.

However configured, the industry groups should be directed to develop recommendations (on a consensus basis whenever possible) within a specified time established by the Commission. While inordinate delays should be avoided, the Commission should assure that the advisory groups have sufficient time to consider fully all relevant issues. The recommendations ultimately submitted to the Commission should go out for additional public comment. All of this input should enable the Commission to develop an effective and comprehensive number portability plan. By this process, the FCC can establish attainable goals and timetables for the establishment of a commercially viable system of number portability that will foster competition among telecommunications services providers and satisfy the demands of telecommunications consumers for convenience and flexibility.

CONCLUSION

PrimeCo urges the Commission to lead the development of a coherent national policy for number portability. The first priority should be the development of a system of service provider portability. To ensure that such a system contains uniform standards, avoids excess cost, and includes the participation of all telecommunications services providers, the FCC should create an industry advisory board to develop recommendations for the implementation of number portability.

Respectfully submitted,



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