DOCKET FILE COPY ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

RECEIVED
FEB 11 1999
FCC MAIL ROOM

In the Matter of	)	
	)	
Cellular Telecommunications Industry Association's Petition for Forbearance From Commercial Mobile Radio Services Number Portability Obligations	)	WT Docket No. 98-229
	)	
and	)	
	)	
Telephone Number Portability	)	CC Docket No. 95-116

MEMORANDUM OPINION AND ORDER

Adopted: February 8, 1999 **Released:** February 9, 1999

By the Commission:

TABLE OF CONTENTS

Paragraph No.

I. INTRODUCTION 1

II. BACKGROUND 3
- A. Number Portability for CMRS Providers 3
- B. Numbering Exhaust and Numbering Resource Optimization 7
- C. Numbering Portability Forbearance Petition 9

III. DISCUSSION 12
- A. CTIA Forbearance Petition and Comments 12
- B. Forbearance Analysis Under Section 10 17
  - 1. Just and Reasonable Charges and Practices 18
  - 2. Consumer Protection 21
  - 3. Public Interest 24
    - Technical Issues 27
    - Competitive Issues 34
    - Numbering Issues 43

IV. CONCLUSION 49

V. ORDERING CLAUSES 50

APPENDIX A - Revised Rules
APPENDIX B - List of Commenters and *Ex Partes*

I. INTRODUCTION

1. On December 16, 1997, the Cellular Telecommunications Industry Association (CTIA) filed a petition with the Commission under section 10 of the Communications Act of 1934, as amended (the Act),[1] requesting that we forbear from imposing service provider local number portability (LNP) requirements on broadband commercial mobile radio service (CMRS) providers until the completion of the five-year buildout period for broadband personal communications service (PCS) carriers.[2] For both technical and competitive reasons discussed below, we grant the petition, and extend the deadline for CMRS providers to support service provider LNP in the top 100 Metropolitan Statistical Areas (MSAs) until November 24, 2002.

2. In considering this petition, we must address concerns regarding the impact that extending the LNP timetable for CMRS providers may have on efforts to increase the efficiency with which carriers utilize numbering resources, in light of the fact that certain important number optimization strategies, including number pooling, are based on existing LNP architecture.[3] We believe that the issue of telephone number utilization and exhaust must be addressed quickly and comprehensively. Therefore, as an initial step, we intend to issue promptly a Notice of Proposed Rulemaking that will propose certain non-LNP-based numbering resource optimization requirements applicable to all sectors of the telecommunications industry that use numbering resources.

II. BACKGROUND

A. Number Portability for CMRS Providers

3. On July 2, 1996, the Commission released its *First Report and Order* in the Number Portability docket (CC Docket No. 95-116), which promulgated rules and deployment schedules for the implementation of number portability by local exchange carriers (LECs) and certain broadband CMRS providers.[4] The Commission determined that enabling wireless subscribers to keep their phone numbers when changing carriers would enhance competition between these carriers, as well as promote competition between wireless and wireline carriers.[5] This determination was supported at the time by many in the wireless industry, particularly new PCS providers, who viewed wireless LNP as important to promoting competition with more established cellular carriers.[6] Further, the Commission concluded that "[i]mplementation of long-term service provider portability by CMRS carriers will have an impact

---

[1] 47 U.S.C. § 160.

[2] Petition for Forbearance of the Cellular Telecommunications Industry Association (filed December 16, 1997) (Forbearance Petition).

[3] *See* discussion at ¶¶ 7-8, *infra*.

[4] Telephone Number Portability, *First Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 95-116, 11 FCC Rcd. 8352 (1996) (*First Report and Order*).

[5] *Id.* at 8434-8436, ¶¶ 157-160.

[6] *Id.* at 8426, ¶ 144.

on the efficient use and uniform administration of the numbering resource."[7]

4. Accordingly, citing its authority under sections 1, 2, 4(i), and 332 of the Act,[8] the Commission required that cellular, broadband PCS, and covered specialized mobile radio (SMR) carriers have the capability to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998, giving CMRS carriers the ability to deliver telephone calls made by their customers on a wireless phone to wireline customers who have retained their telephone number but switched service providers.[9] In addition, CMRS carriers in the top 100 MSAs were required to offer service provider LNP, including the ability to support roaming, throughout their networks by June 30, 1999, which allows CMRS customers to retain their telephone numbers when switching carriers.[10]

5. In setting the deployment schedule for CMRS number portability, the Commission noted that wireless carriers were only beginning to develop the technical standards and protocols needed to support number portability on their networks. In addition, the Commission observed that wireless carriers faced certain unique technical challenges in implementing number portability, in particular the need to configure their networks so that wireless users with ported numbers would be able to make and receive calls while roaming outside their home service areas.[11] Thus, the Commission's implementation schedule for CMRS number portability allowed a longer period for deployment than for local exchange carriers. In addition, the Commission delegated authority to the Chief of the Wireless Telecommunications Bureau (WTB), to extend the dates contained in the CMRS implementation schedule up to nine months.[12] On reconsideration, the Commission upheld its decision

---

[7] *Id.* at 8431-32, ¶ 153.

[8] *Id.* at 8433, ¶ 155. Bell Atlantic Mobile, Inc. (BAM) has challenged the statutory authority of the Commission to impose number portability requirements on CMRS carriers. That appeal is currently pending in the United States Court of Appeals for the Tenth Circuit.

[9] *Id.* at 8440, ¶ 165. This requirement is not at issue in CTIA's petition.

[10] *Id.* at 8440, ¶ 166. In this order, we use "CMRS" to refer only to broadband PCS, cellular, and SMR carriers that are subject to service provider LNP requirements. We note that the Commission has recently adopted a new definition of "covered" services that must support LNP, which consists of systems offering real-time, two-way switched voice services that are interconnected with the public switched network and that utilize in-network switching facilities, enabling the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls. Thus, number portability must be provided by PCS, cellular, and SMR licensees only if they provide "covered" services under this definition. Telephone Number Portability, *Second Memorandum Opinion and Order on Reconsideration*, CC Docket No. 95-116, 13 FCC Rcd. 21204, 21228-30, ¶¶ 52-57 (1998).

[11] *First Report and Order*, 11 FCC Rcd. at 8440, ¶ 166 ("The record indicates that additional time is needed to develop standards and protocols, such as ten-digit-based screening, to overcome the technical burdens unique to the provision of seamless roaming on cellular, broadband PCS, and covered SMR networks").

[12] *Id.*

to impose number portability requirements on CMRS providers, with some clarifications.[13]

6. On November 24, 1997, CTIA filed a petition with WTB to exercise its delegated authority to extend the CMRS service provider number portability deadline by nine months.[14] In support of the petition, CTIA and others presented evidence that a majority of the CMRS industry could not implement wireless number portability under the original schedule. On September 1, 1998, WTB granted the requested nine-month extension, stating that it was necessary to provide additional time for the wireless industry to develop and test standards in order to ensure efficient deployment of wireless number portability.[15] As a result of the *Bureau Extension Order*, the CMRS implementation deadline was extended from June 30, 1999 to March 31, 2000.[16]

B. Numbering Exhaust and Numbering Resource Optimization

7. For the last few years, this Commission, state regulators, and the telecommunications industry have been concerned with the premature exhaust of the numbering resources provided through the North American Numbering Plan (NANP).[17] In recent years, the rapid growth in demand for

---

[13] On reconsideration, the Commission clarified that under the CMRS implementation timetable, CMRS providers (1) were required to offer service provider LNP by June 30, 1999 only in the 100 largest MSAs, provided a request was received at least nine months before the deadline, and (2) must be able to support nationwide roaming. Telephone Number Portability, *First Memorandum and Opinion and Order on Reconsideration*, CC Docket No. 95-116, 12 FCC Rcd. 7236, 7313, ¶ 136 (1997) (*Order on Reconsideration*).

[14] Petition for Extension of Implementation Deadlines of the Cellular Telecommunications Industry Association (filed November 24, 1997) (Extension Petition).

[15] Telephone Number Portability, Petition for Extension of Implementation Deadlines of the Cellular Telecommunications Industry Association, *Memorandum Opinion and Order*, CC Docket No. 95-116, 13 FCC Rcd. 16315 (1998) (*Bureau Extension Order*).

[16] *Id.* at 8.

[17] The North American Numbering Plan (NANP) is the basic numbering scheme permitting interoperable telecommunications service within the United States, Canada, Bermuda, and most of the Caribbean. In one of its first meetings in December 1996, the North American Numbering Council (NANC), a federal advisory committee that advises the Commission on numbering policy issues, discussed how rate center consolidation and implementation of number portability might help prevent area code exhaust. *See* NANC Meeting Minutes, December 2, 1996, page 4. The NANC directed the Carrier Liaison Committee (CLC), a committee of the Alliance for Telecommunications Industry Solutions, to examine this issue further. *See* NANC Meeting Minutes, January 28, 1997. In October 1997, the NANC forwarded the CLC's report on numbering exhaust to the Chief of the Common Carrier Bureau. *See* Report of the North American Numbering Council (NANC) Concerning the Report from the CLC entitled "Short Term Technical Alternatives to NXX Exhaust," dated October 3, 1997. *See* Letter from Thomas L. Welch, Chairman, and Stephen L. Diamond, Commissioner, Maine Public Utilities Commission, to William E. Kennard, Chairman, FCC, dated December 9, 1998 (Maine PUC *ex parte*); Letter from Erin K. Duffy, North Carolina Utilities Commission Staff, to Magalie Roman Salas, Secretary, FCC, dated December 10, 1998 (NCUC Staff *ex parte*); Letter from Lawrence G. Malone, General Counsel, State of New York Department of Public Service, to William E. Kennard, Chairman, FCC, dated December 10, 1998 (New York PSC December 10 *ex parte*); Letter from Lawrence G. Malone, General Counsel, State of New York

central office codes (or "NXX" codes), attributable both to inefficiencies in the current system for allocation of telephone numbers[18] and to recent, fundamental changes to the structure of the telecommunications marketplace, has led to a numbering exhaust crisis that has placed many existing area codes in jeopardy.[19]

8. In March 1998, the Common Carrier Bureau (CCB) requested that the NANC prepare a report on possible measures to increase the efficient use and allocation of existing numbering resources.[20] On October 21, 1998, NANC submitted a report (NANC Report) to CCB identifying fourteen measures that may be used to optimize the use of numbering resources.[21] On November 6, 1998, CCB sought public comment on the NANC report, in order to explore ways that all carriers can optimize number efficiency.[22] The Bureau's Public Notice focused specifically on six of the measures identified by the NANC. Of those six measures, three are forms of number pooling[23] that are

---

Department of Public Service, to William E. Kennard, Chairman, FCC, dated February 2, 1999 (New York PSC February 2 *ex parte*); Letter from Stephen E. Gorka, Assistant Counsel, Pennsylvania PUC Law Bureau, to Magalie Roman Salas, Secretary, FCC, dated December 14, 1998 (Pennsylvania PUC *ex parte*); Letter from Pat Wood, III, Chairman, and Judy Walsh, Commissioner, Public Utility Commission of Texas, to William E. Kennard, Chairman, FCC, dated December 14, 1998 (Texas PUC *ex parte*).

[18] Under the current allocation system, most carriers must obtain an NXX code, containing 10,000 telephone numbers, for each rate center in which they provide service in a given area code. Depending upon how many customers the carrier has in that rate center, many of those 10,000 numbers could go unused for considerable periods of time.

[19] Jeopardy is defined as a situation where the forecasted and/or actual demand for NXX codes in an anrea code will exceed the known supply during the planning/implementation interval for area code relief. *NPA Code Relief Planning Guidelines and Notification Guidelines* (INC 97-0404-016, issued April 4, 1997).

[20] Letter from A. Richard Metzger, Jr., Chief, Common Carrier Bureau, to the NANC, dated March 23, 1998. The letter directed the NANC to provide a report sufficiently detailed to support, both technically and operationally, a uniform, nationwide system for pooling by December 1999, and to give other number conservation solutions a very high priority in its report.

[21] Number Resource Optimization Working Group Modified Report to the North American Numbering Council on Number Optimization Methods, October 21, 1998 (NANC Report). This report is available at <http://www.fcc.gov/ccb/Nanc/nanccorr.html>.

[22] Common Carrier Bureau Seeks Comment on North American Numbering Council Report Concerning Telephone Number Pooling and Other Optimization Measures, *Public Notice*, NSD File No. L-98-134, DA 98-2265 (November 6, 1998) (*NANC Report Public Notice*).

[23] Telephone number pooling technologies allow numbers to be allocated to carriers in blocks of less than 10,000 numbers, allowing number allocation to more closely match a given carrier's needs. When combined with reclamation, number pooling enables redistribution of previously allocated, but as yet unactivated, telephone numbers, allowing more efficient utilization of "stranded" telephone number resources. *NANC Report Public Notice* at 4.

dependent on existing LNP architecture that utilizes the Location Routing Number (LRN) method.[24] In order to maximize the benefits of these LNP-based measures, the NANC Report indicates that maximum service provider participation in LNP is required.[25]

C. Number Portability Forbearance Petition

9. On December 15, 1997, CTIA filed the instant petition requesting that the Commission exercise its section 10 forbearance authority by forbearing from enforcing the implementation deadline for CMRS service provider number portability until the five-year buildout period for broadband PCS carriers has expired.[26] The Commission released a Public Notice seeking comment on the Petition.[27] Sixteen parties filed comments and twelve parties filed reply comments.[28]

10. On December 15, 1998, we exercised our authority under Section 10(c) of the Act to extend until March 16, 1999, the date on which CTIA's petition would be deemed granted in the absence of a Commission decision that the petition did not meet the standard for forbearance under section 10(a).[29] In our extension order, we stated that the additional time was required to allow further development of the record on the potential impact of extending the deadline for wireless LNP implementation on number exhaust and number conservation issues.[30] We noted that the NANC's report on numbering resource optimization had been submitted to the Common Carrier Bureau on October 21, 1998, and that comments on the NANC Report were due on December 21, 1998. As the comment deadline was five days after the one-year deadline for acting on CTIA's petition, we stated that we would defer a decision on the petition so that we would have the opportunity to consider

---

[24] *See* NANC Report, Executive Summary. The three methods are "thousand-block" number pooling (numbers would be pooled in blocks of 1,000), individual number pooling (pooling at the individual number level), and unassigned number porting (unassigned numbers are allocated among multiple carriers by a neutral coordinator). A fourth method identified in the NANC Report is location portability, which would enable customers to port their numbers when moving from one geographic location to another. The Commission has determined that section 251(b)(2) of the Act does not require LECs to provide location portability. *First Report and Order*, 11 FCC Rcd at 8447, ¶ 181. The Commission has concluded, however, that nothing in the Act precludes it from mandating location portability in the future if the Commission determines it to be in the public interest. *Id.* at ¶ 182.

[25] NANC Report, Executive Summary at 10-11.

[26] Forbearance Petition at 3. The Forbearance Petition was filed while CTIA's Extension Petition was pending before WTB and prior to the *Bureau Extension Order*.

[27] *See Public Notice*, Wireless Telecommunications Bureau, DA 98-111 (January 22, 1998).

[28] A list of commenters and reply commenters is found in Appendix B.

[29] Cellular Telecommunications Industry Association's Petition for Forbearance from Commercial Mobile Radio Services Number Portability Obligations, *Memorandum Opinion and Order*, WT Docket No. 98-229, FCC 98-330 (adopted December 15, 1998; released December 16, 1998) (*Extension Order*).

[30] *Id.*, ¶ 3.

responsive comments on both LNP-based and non-LNP-based number optimization methods.[31] We also urged wireless carriers and other interested parties to (1) address whether it is appropriate from a legal, policy, or technical standpoint to consider numbering resource optimization concerns in addressing CTIA's petition; (2) provide information on current utilization of numbering resources by wireless carriers (particularly in the 100 largest MSAs); and (3) offer proposals for wireless carriers to promote efficient use of numbering resources before implementing LNP.[32]

11. Since the adoption of the *Extension Order*, staff from the Common Carrier Bureau and the Wireless Telecommunications Bureau have held a number of meetings with CMRS providers and industry associations regarding number utilization by CMRS providers, and ways in which CMRS providers may increase the efficiency with which they obtain and utilize numbering resources.[33] In addition, in response to our request in the *Extension Order*, we have received several explicit proposals from the wireless industry concerning non-LNP based standards for ensuring efficient number utilization.[34]

III. DISCUSSION

A. CTIA Forbearance Petition and Comments

12. In its Forbearance Petition, CTIA argues that the implementation deadline for wireless service provider portability should be extended not only because of the technical complexity of implementing portability, but also on the grounds that near-term implementation of wireless number portability is not essential to competition and could harm existing competition by forcing wireless carriers to divert resources from other endeavors such as expanding network coverage and improving service quality.[35] CTIA also argues that the capital requirements associated with implementing wireless number portability will impede network buildout and reduce price competition without a commensurate benefit to competition.[36] Therefore, CTIA argues that forbearance from CMRS number portability obligations until the five-year PCS buildout period has ended is appropriate under a section 10 forbearance analysis.

---

[31] *Id.*, ¶¶ 4-5.

[32] *Id.*, ¶ 5.

[33] *See, e.g.*, Letter from Ben G. Almond, BellSouth, to Magalie Roman Salas, Secretary, FCC, dated December 22, 1998 (BellSouth December 22 *ex parte*); Letter from Lawrence R. Krevor, Nextel Communications, Inc. (Nextel), to Magalie Roman Salas, Secretary, FCC, dated December 23, 1998; Letter from Robert L. Hoggarth, Personal Communications Association (PCIA), to Magalie Roman Salas, dated December 23, 1998; Letter from Pamela Riley, AirTouch Communications (AirTouch), to Magalie Roman Salas, Secretary, FCC, dated January 7, 1999.

[34] *See* discussion at ¶ 46, *infra*.

[35] Forbearance Petition at 3-7.

[36] *Id.*

13. Most wireless industry commenters support the views of CTIA.[37] For example, AirTouch maintains that implementing number portability under the current schedule will impair competition by restricting the ability of CMRS carriers to offer lower prices, expanded coverage, or to undertake new investments.[38] Similarly, Century Cellunet and the Rural Telecommunications Group argue that requiring rural carriers to divert resources from network buildout to the implementation of number portability would delay and possibly halt the progress these entities are making in the delivery of new and upgraded services to rural areas.[39] Among the commenters supporting CTIA's petition are some who originally supported wireless LNP to encourage customer migration from cellular to PCS.[40] PCIA, which previously advocated wireless LNP on behalf of the PCS industry, supports CTIA's petition on the grounds that it creates a flexible economic and technology-driven deadline for the implementation of LNP.[41] PrimeCo, another early advocate of rapid deployment of wireless LNP, now contends that wireless LNP is not essential to PCS-cellular competition because subsequent market experience has shown such competition to be vigorous notwithstanding the absence of LNP.[42]

14. A few wireless industry commenters argue that we should forbear completely from applying number portability requirements to CMRS carriers. These commenters assert that there is no consumer demand for wireless number portability now, and that if such demand develops in the future, the market will respond to provide it.[43] In contrast, other commenters, primarily wireless resellers and wireline carriers, not only support the existing wireless number portability requirements, but oppose any further extension of the wireless number portability deadline beyond March 31, 2000.[44] These parties argue that number portability implementation can be achieved within the current deadline without impairing network buildout or service upgrades,[45] that the technological and financial obstacles to implementing wireless number portability have been exaggerated by CTIA and commenters

---

[37] *See* AirTouch Comments at 3; BAM Comments at 3; GTE Service Corporation (GTE) Comments at 6; PrimeCo Personal Communications, L.P. (PrimeCo) Comments at 1; Southwestern Bell Mobile Systems Inc. (SBC) Comments at 2; United States Cellular Corporation (USCC) Comments at 3: Upstate Cellular Network (Upstate) Comments at 1; and Western Wireless (Western) Comments at 3.

[38] AirTouch Comments at 3.

[39] Century Cellunet, Inc. (Century) Comments at 7; Rural Telecommunications Group (RTG) Comments at 2-4.

[40] *See First Report and Order*, 11 FCC Rcd. at 8425-8426, ¶¶ 142-145.

[41] PCIA Comments at 4.

[42] PrimeCo Comments at 2.

[43] BAM Reply Comments at 6; PrimeCo Reply Comments at 12 ("PrimeCo submits that market forces -- and consumer demands -- should determine the implementation date for WNP").

[44] Microcell Comments at 2; Nextel Comments at 2; Telecommunications Resellers Association (TRA) Comments at 2-3; WorldCom Wireless Inc. (WorldCom) Comments at 3-4.

[45] MCI Reply Comments at 2-5; Microcell Comments at 2-3; Nextel Comments at 5; TRA Comments at 5; WorldCom Comments at 7-8.

supporting the petition[46] and that wireless number portability will not develop even in response to consumer demand unless it is mandated by the Commission.[47]

15. The record also contains commentary on the numbering exhaust and number resource optimization issues and their relationship to number portability. Several state public utility commissions argue that the potential benefits of LNP-based number optimization measures, such as thousands-block number pooling, may be significantly diminished if wireless carriers are not capable of participating.[48] In contrast, CMRS carriers argue that the wireless industry is among the most efficient of industry segments in its use of numbering resources, and that the high demand for numbers by wireless carriers has been driven primarily by rapid subscriber growth.[49] With respect to number pooling, CMRS carriers point out that the Commission has not yet implemented pooling requirements for any class of carriers, including wireline carriers, and must undertake further proceedings before it can do so.[50] They also argue that CMRS participation in number pooling would be of marginal value to number conservation efforts, because CMRS carriers typically draw numbers from only a few rate centers within an NPA, and, due to high subscriber growth rates, would be unable to contribute significant quantities of numbers to numbering pools even within those rate centers.[51]

16. We address these arguments below, applying the three-prong analysis of section 10 of the Communications Act.

B. Forbearance Analysis Under Section 10

17. Section 10 provides that the Commission must forbear from applying any regulation or provision of the Act to a telecommunications carrier if the Commission determines that:

> (1) enforcement of such regulation or provision is not necessary to ensure that the charges, practices, classifications or regulations by, for or in connection with that telecommunications carrier or telecommunications service are just and reasonable, and are not unjustly or unreasonably discriminatory;

---

[46] TRA Comments at 3.

[47] MCI Comments at 5.

[48] *See* Maine PUC *ex parte* ("Delaying wireless number portability will delay wireless carriers' ability to participate in thousand block pooling and other number conservation measures which require number porting capabilities. Wireless carriers should not be allowed to have it both ways -- if they want technology-neutral NPAs, they must be able to and willing to participate in technology-neutral number conservation measures as soon as possible"). *See also* NCUC Staff *ex parte*; New York PSC December 10 *ex parte*; New York PSC February 2 *ex parte*; Pennsylvania PUC *ex parte*; Texas PUC *ex parte*.

[49] SBC *ex parte* presentation, December 9, 1998 (SBC December 9 *ex parte*); PrimeCo *ex parte* presentation, January 6, 1999 (PrimeCo January 6 *ex parte*); BellSouth December 22 *ex parte*.

[50] Letter from Douglas I. Brandon, AT&T, to Magalie Roman Salas, Secretary, FCC, dated February 1, 1999.

[51] PrimeCo January 6 *ex parte* at 3; SBC December 9 *ex parte* at 3.

(2) enforcement of such regulation or provision is not necessary for the protection of consumers; and

(3) forbearance from applying such provision or regulation is consistent with the public interest.[52]

We address each criterion in turn.

1. Just and Reasonable Charges and Practices

18. **Background**. The first prong of the section 10 forbearance test requires us to examine whether adhering to the current wireless number portability deadline is necessary to ensure that CMRS charges, practices, classifications, and services are just and reasonable, and are not unjustly or unreasonably discriminatory."[53] CTIA argues that the first prong of the section 10 forbearance test is met because CMRS providers are currently operating in a highly competitive environment with no one provider exercising substantial monopoly power.[54] As a consequence, CTIA argues that CMRS carriers are necessarily barred from engaging in unjust or unreasonable pricing or from "harming" consumers as a matter of course.[55] Additionally, CTIA argues that extending the number portability requirements until the conclusion of the PCS five-year buildout period will allow PCS entrants in the CMRS marketplace to devote capital resources to network buildout, which will have greater impact than portability on lowering rates as well as increasing overall competition.[56]

19. **Discussion**. We conclude that retaining the current wireless number portability implementation schedule is not necessary to prevent unjust or unreasonable charges or practices by CMRS carriers. As a threshold matter, we note that LNP would not play a direct role in ensuring that a carrier's rates are just and reasonable.[57] Rather, its impact on carrier rates would flow from its impact in promoting competition in the wireless service market. Based on the current dynamics of the CMRS market, however, we do not perceive LNP requirements as necessary to promote such competition. In our recent *Third CMRS Competition Report*, we noted that competition in the mobile telecommunications environment has increased significantly as a result of recent service launches by

---

[52] 47 U.S.C. § 160(a).

[53] *Id.*, § 160(a)(1).

[54] Forbearance Petition at 7-8.

[55] *Id.* at 8.

[56] *Id.* at 3.

[57] Because they are not subject to rate regulation, CMRS carriers may determine whether and to what extent they will pass implementation costs of LNP to their customers. *See* Telephone Number Portability, *Third Report and Order*, CC Docket No. 95-116, 13 FCC Rcd. 11701, 11774, ¶ 136 (1998).

broadband PCS and SMR carriers.[58] While network coverage and buildout of new entrants is still less extensive than that of more established cellular carriers, we found that broadband PCS and SMR carriers have achieved a significant presence in most major markets across the country.[59] Additionally, several pricing trend reports indicate that broadband CMRS prices have been falling and that these reductions are at least partly the result of entry by new competitors.[60] In this environment, we do not believe that giving wireless carriers more time to implement number portability will lead to unjust or unreasonable charges or practices by carriers either in general or with respect to number portability specifically. To the contrary, as discussed in greater detail in Section III.B.3 below, not only is CMRS competition currently growing rapidly without LNP, but in the near term, LNP does not appear to be critical to ensuring that this growth continues.

20. Commenters who oppose forbearance argue that if we do not adhere to the current schedule, carriers will be able to deter competition by refusing to implement number portability even if there is consumer demand for it.[61] As noted in Section III.B.3 below, we do not dispute the need for regulatory intervention to ensure that wireless number portability is eventually deployed. However, we do not believe that changing the timing of deployment to the degree requested by CTIA will lead to widespread abuses by the CMRS industry such as unjust and unreasonable rates or discriminatory charges or practices, given the marketplace conditions that exist at this time. In addition, as several commenters point out, other provisions of the Act, such as sections 201 and 202, may be invoked to prevent CMRS providers from imposing unjust or unreasonable charges or practices.[62]

2. Consumer Protection

21. **Background**. The second prong of the section 10 forbearance standard requires that we consider whether enforcement of existing wireless number portability requirements is necessary for

---

[58] Implementation of Section 6002(b) of the Omnibus Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Third Report*, FCC 98-91 (released June 11, 1998) (*Third CMRS Competition Report*).

[59] *Id.* at 3.

[60] *Id.* at 19-20 ("there are a number of reports available indicating that the entrance of new competitors into this market is beginning to have the desired effect on prices"). *See also*, Donaldson, Lufkin & Jenrette Report, "The Wireless Communications Industry," Winter 1998/1999 (DLJ Report), at 14 (average monthly revenues per wireless subscriber fell 9.1% between mid-1997 and mid-1998).

[61] MCI Comments at 5; TRA Comments at 9-11; WorldCom Comments at 7-8.

[62] BAM Comments at 5 ("[g]iven the continued availability of sections 201 and 202 to review the practices of CMRS providers, address complaints, and protect consumers, wireless number portability provides no added protection"). We note that the Commission recently declined to forbear from enforcement of sections 201 and 202 to broadband PCS carriers. *See* Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance for Broadband Personal Communications Services, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, WT Docket No. 98-100, 13 FCC Rcd. 16857 (1998).

the protection of consumers.[63] CTIA claims that wireless customers will best be served by all CMRS carriers concentrating their resources on improving market coverage and rapidly introducing additional facilities-based competition, than by having portable numbers.[64] Therefore, CTIA argues that the second prong of the section 10 forbearance analysis is met. Commenters opposing forbearance, however, contend that any delay in the implementation schedule will harm wireless consumers by depriving them of the ability to port their telephone numbers.[65]

22. Discussion. We conclude that extending the LNP implementation deadline is appropriate under the second prong of the section 10 forbearance standard for similar reasons to those discussed above with respect to the first prong. There is no evidence that requiring wireless carriers to adhere to the current implementation schedule is necessary to prevent affirmative harm to consumers. The record indicates that the demand for wireless number portability among CMRS consumers is currently low and that consumers are more concerned about competition in other areas such as price and service quality.[66] In addition, the high incidence of switching between wireless carriers (popularly referred to as "churn") indicates that many wireless customers easily and routinely switch from one carrier to another without the benefit of number portability.[67] Therefore, we conclude that the limited forbearance requested by CTIA will not harm consumers.

23. In reaching the above conclusion, we emphasize that we continue to view wireless LNP as providing important benefits to wireless consumers. While we believe that extending the implementation deadline until November 2002 will not harm consumers, we consider it likely that in the longer term, wireless number portability will be an increasingly important issue for consumers. We anticipate that as wireless service rates continue their downward trend and the use of wireless service increases, there is a greater likelihood that customers will view their wireless phones as a

---

[63] 47 U.S.C. § 160(a)(2).

[64] Forbearance Petition at 8.

[65] *See, e.g.*, TRA Comments at 7-9; PageNet Comments at 2-3, n.1.

[66] AirTouch Comments at 8. BAM contends that "[h]ad there been any CMRS-related consumer protection issue, it would have surfaced at the time when wireless services were much less competitive than they are today." BAM Comments at 7. PrimeCo maintains that although number portability would prove more convenient to some consumers, high churn rates among wireless carriers indicate that customers routinely and easily switch from one carrier to another. PrimeCo Comments at 9. Upstate and Western assert that there is simply no consumer demand for CMRS number portability at this time. Upstate Comments at 3; Western Comments at 8.

[67] Industry reports indicate that the rate of wireless customer churn is significant and may be increasing. *See, e.g.*, "Churn, Churn, Go Away: Carriers Need To Do More to Keep Customers," Telephony, September 14, 1998 (survey shows 23% of current wireless users have switched carriers at least once since they first became subscribers); "Lack of Loyalty Hurts: Study Pegs U.S. Churn Potential At 38%," Communications Today, August 24, 1998 (research by Strategy Analytics indicates 38 percent of U.S. households who use cellular or PCS services may elect to switch carriers during the next 12 months); "Straight from the Source: The Consumer," RCR Radio Communications Report, September 28, 1998 (survey of wireless customers shows likelihood of switching carriers is increasing).

potential substitute for their wireline phones.[68] This trend will likely be further amplified to the degree that wireless carriers offer a "calling party pays" option, which may encourage customers to give out their wireless phone number on the same basis as a wireline phone number.[69] Thus, the ability of customers to port numbers both to and from wireless carriers is likely to be an increasingly important factor in consumer choice.[70]

3. Public Interest

24. **Background**. The third prong of the section 10 analysis requires that we consider whether forbearance is consistent with the public interest.[71] CTIA and a majority of wireless commenters claim that forbearance from CMRS number portability requirements until the conclusion of the five year PCS buildout period fully satisfies this public interest standard.[72] These parties argue that adhering to the current implementation schedule compromises the ability of new CMRS entrants to build out their network infrastructure and thereby introduce vigorous competition in the CMRS marketplace.[73] They also contend that forbearance will allow new carriers to focus on expanding service to the public and providing telecommunications services at lower cost.[74] Other commenters, however, contend that wireless number portability can be pursued concurrently with network buildout, and accuse wireless carriers who support forbearance of engaging in delay tactics in hopes of forestalling competition.[75]

25. **Discussion**. We conclude that the record demonstrates that forbearance from the application of wireless number portability requirements until the completion of the broadband PCS buildout period is consistent with the public interest. First, we find that the wireless industry needs additional time beyond the March 31, 2000 implementation deadline to develop and deploy the technology that will allow viable implementation of service provider portability, including the ability

---

[68] *See, e.g.*, The Yankee Group Report, Year-End 1998 Wireless Industry Update: The Impact of All-Inclusive Rates, December 1998, at 11-12.

[69] *First Report and Order*, 11 FCC Rcd. at 8437, ¶ 161. *See generally* Calling Party Pays Service Option in the Commercial Mobile Radio Services, *Notice of Inquiry*, WT Docket No. 97-207, 12 FCC Rcd. 17693 (1997) (initiating an inquiry to explore the subject of calling party pays (CPP) in order to develop a record for determining whether the wider availability of CPP would enable CMRS providers to more readily compete with wireline services provided by LECs, and for determining whether there are actions that the Commission could take to promote the wider availability of CPP for CMRS providers).

[70] *See First Report and Order*, 11 FCC Rcd. at 8434-36, ¶¶ 157-159.

[71] 47 U.S.C. § 160(a)(3).

[72] Forbearance Petition at 9.

[73] 360o Reply Comments at 4; AirTouch Comments at 8; BAM Comments at 16; GTE Comments at 7-8; PrimeCo Comments at 10-13; SBC Comments at 6; Upstate Comments at 4; Western Comments at 8.

[74] AirTouch Comments at 8.

[75] Microcell Comments at 2; Nextel Comments at 2; TRA Comments at 2-3; WorldCom Comments at 3-4.

to support seamless nationwide roaming. Second, we conclude that extending the deadline until November 2002 is consistent with the public interest for competitive reasons because it will give CMRS carriers greater flexibility in that time-frame to complete network buildout, technical upgrades, and other improvements that are likely to have a more immediate impact on enhancing service to the public and promoting competition in the telecommunications marketplace. Conversely, we see insufficient competitive benefit to justify the cost and technical burden of implementing LNP more rapidly.

26. Finally, we conclude that we must ensure that extending the timeframe for implementation of CMRS number portability does not adversely effect our efforts to increase the efficiency with which carriers, including carriers who are not LNP-capable, utilize numbering resources. The records in this proceeding and other proceedings examining the numbering exhaust problem demonstrate that we must act quickly to promote efficient use of numbers by all carriers. As discussed further below, we intend as an initial step to promptly initiate a Notice of Proposed Rulemaking that will propose certain non-LNP based numbering optimization techniques applicable to all telecommunications carriers. We also intend to move forward to develop standards for a variety of other number conservation methods, possibly including one or more pooling methods.

27. Technical Issues. In the *Bureau Extension Order*, the Bureau found that most CMRS providers would be unable to meet the original implementation deadline of June 30, 1999 because standards had not yet been adopted that would permit most CMRS carriers to effectively offer number portability to their customers, including the ability to roam nationwide.[76] CTIA and the majority of commenters maintain that despite the nine-month extension, it remains infeasible to implement number portability under the revised implementation schedule.[77]

28. We agree that some additional time to implement LNP should be afforded to wireless carriers on technical grounds. One of the primary issues in the implementation process for wireless is the proposed adoption of standards for implementation of number portability through the separation of the Mobile Directory Number (MDN), the number that is dialed to reach the mobile unit, from the Mobile Identification Number (MIN), which is used to identify the mobile unit to the carrier's network and to the networks of the carrier's roaming partners.[78] For AMPS, CDMA, and TDMA-based carriers, the MDN and the MIN are currently the same for each subscriber, and are associated with a particular carrier. To implement number portability, however, the industry proposes to configure all wireless networks so that the MIN and the MDN of any mobile unit can be separated when a customer ports from one wireless carrier to another. Under this scenario, the MDN will be ported by the customer when the customer switches carriers, but the MIN (a ten-digit non-dialable number) will

[76] *Bureau Extension Order*, 13 FCC Rcd. at 16318-20, ¶¶ 8-11.

[77] *See* Letter from Michael Altschul, CTIA, to Steven E. Weingarten, Chief, Commercial Wireless Division, Wireless Telecommunications Bureau, dated August 25, 1998, at 2-3 (CTIA August 25 *ex parte*).

[78] When a mobile subscriber is roaming, the MIN is used by the carrier in the visited market to identify the roamer's home market and to communicate with the roamer's home carrier for validation and fraud prevention.

remain programmed in the customer's old mobile phone, which can then be reused (with another MDN) by the customer's old carrier.[79]

29. Development of the MIN/MDN separation standard was completed in late August 1998, but the wireless industry has not yet completed the standards balloting and adoption process to allow manufacturers to begin work on software delivery to CMRS carriers.[80] Following the adoption of the MIN/MDN standard, wireless carriers estimate that manufacturers will require 18 months to two years to provide software to their CMRS customers.[81] In turn, wireless carriers indicate that another twelve months will be necessary to conduct laboratory and field testing to ensure the reliability, quality, and integrity of the service.[82] Even if one discounts these estimates somewhat or concludes that the timeframe could be accelerated, it is still reasonable to conclude that the current implementation date for LNP is not practically feasible.

30. We recognize that some wireless carriers may require less time than others to implement number portability capability in their networks. The record indicates that GSM carriers are likely to have this capability much sooner than other carriers, in large part because GSM technology already utilizes separate MINs and MDNs for mobile units on the system.[83] Some non-GSM carriers have also suggested accelerated deployment schedules that would introduce number portability as early

---

[79] Because the MIN will not be ported, the old carrier's roaming partners can continue to use it to identify the home carrier of the mobile unit without significant reprogramming of their roaming software and databases. In addition, because MIN/MDN separation effectively makes the MDN "non-resident" to any particular mobile phone, it eliminates the need for a carrier to reprogram or replace its customers' mobile phones in the event of other changes affecting the MDN, such as area code splits.

[80] *See Bureau Extension Order*, 13 FCC Rcd. at 16318-19, ¶¶ 8-9. Wireless number portability standards are being developed in Telecommunications Industry Association (TIA) committees, and are then voted on by TIA's members. *See* Letter from Michael Altschul, CTIA, to Magalie Roman Salas, Secretary, FCC, dated July 17, 1998; *see also* Letter from May Chan, GTE, to Magalie Roman Salas, Secretary, FCC, dated October 29, 1998 (GTE Oct. 29, 1998 *ex parte*). The balloting process for cellular analog, CDMA, and TDMA standards was recently concluded, and these standards have been approved for publication. GSM standards have also been balloted but not yet published. However, the wireless and wireline industries have not yet reached consensus on standards for integration of wireless and wireline LNP, and there is no set date for resolution of this issue. Letter from Michael Altschul, CTIA, to Jeanine Poltronieri, Wireless Telecommunications Bureau, dated February 3, 1999 (CTIA February 3 *ex parte*).

[81] *See* Letter from Barbara A. Baffer, Ericsson Corporation, to Magalie Roman Salas, Secretary, FCC, dated August 5, 1998; Letter from Mary E. Brooner, Motorola, Inc. to Magalie Roman Salas, Secretary, FCC, dated August 7, 1998, at 3 (Motorola *ex parte*). CTIA estimates that 18 months will be required. *See* CTIA August 25 *ex parte*.

[82] *See* Letter from Howard J. Symons, AT&T, to Magalie Roman Salas, Secretary, FCC, dated May 26, 1998 (AT&T May 26 *ex parte*); Letter from Ben G. Almond, BellSouth, to Magalie Roman Salas, Secretary, FCC, dated June 25, 1998 (BellSouth June 25 *ex parte*); Motorola *ex parte* at 3.

[83] *See Bureau Extension Order*, 13 FCC Rcd. at 16319-20, ¶¶ 9-10.

as twelve to eighteen months after the industry has adopted a MIN/MDN separation standard.[84] Even if it is technically feasible for some CMRS carriers to deploy number portability under accelerated schedules, we believe that to facilitate the goals of deploying portability in all major markets and to support nationwide roaming, the deadline we establish should be one that is realistic for the wireless industry as a whole.

31. In recent *ex partes*, the Telecommunications Resellers Association (TRA) has argued that the wireless industry does not require any additional time beyond March 2000 to implement LNP because there is an alternative approach that would enable the industry to support LNP without having to use the MIN/MDN separation process.[85] TRA suggests that wireless LNP be implemented by the use of a solution, known as "LRN relay," which it contends can be implemented at relatively low cost[86] and within the current time frame for wireless LNP implementation.[87] Several wireless carriers respond vigorously that TRA's proposal is technically flawed and unworkable.[88] CTIA contends that the TRA approach would necessitate adoption of 10-digit Global Title Translation (GTT) to complete CMRS calls, in contrast to the six-digit field currently used, which would require extensive

---

[84] *See* AT&T May 26 *ex parte* (18-month deployment schedule); BellSouth June 25 *ex parte* (12-month deployment schedule). BellSouth's estimate is predicated on number portability implementation having only "minor technical impact" to the network. If the implementation process has unanticipated "major" technical impacts, however, BellSouth estimates that implementation could take 2-4 years.

[85] TRA did not raise the issue of alternatives to MIN/MDN separation in its initial comments on CTIA's forbearance petition. TRA's first presentation of its proposed alternative in this proceeding occurred in an October 22, 1998 *ex parte* presentation to FCC staff. *Ex parte* presentation by TRA, October 22, 1999 (TRA October 22 *ex parte*). On November 24, 1998, TRA filed a report expanding on and modifying its October 22, 1998 proposal. *Ex parte* letter from David Gusky, Vice President, TRA, to William E. Kennard, Chairman, FCC, dated November 24, 1998, attaching report entitled "The Case for LRN-Relay" (TRA November 24 *ex parte*). TRA requested that we place the TRA report on public notice. *See ex parte letter* from David Gusky, Vice President, TRA, to William E. Kennard, Chairman, FCC, dated December 4, 1998. As discussed below, we believe the industry standards development process is the appropriate vehicle for consideration of TRA's proposal.

[86] TRA initially estimated that wireless LNP based on LRN relay could be implemented for a one time capital investment of approximately $98.7 million and annual recurring costs of approximately $52.2 million for each of the next three years. TRA November 24 *ex parte*, TRA Report at 25. In a subsequent *ex parte*, TRA revised its estimate to include $52.2 million in recurring costs for five years, for a total of $369.5 million. Letter from Linda Oliver, Counsel for TRA, to Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, dated February 3, 1999.

[87] TRA November 24 *ex parte* at 3.

[88] Letter from May Chan, GTE, to Magalie Roman Salas, Secretary, FCC, dated November 13, 1998 (GTE November 13 *ex parte*); letter from Michael F. Altschul, CTIA, to Magalie Roman Salas, Secretary, FCC, dated November 30, 1998 (CTIA November 30 *ex parte*); letter from May Chan, GTE, to Magalie Roman Salas, Secretary, FCC, dated February 2, 1999; letter from Pamela Riley, AirTouch, to Magalie Roman Salas, Secretary, FCC, dated February 2, 1999 (AirTouch February 2 *ex parte*); letter from Douglas Brandon, AT&T Wireless, to Magalie Roman Salas, Secretary, FCC, dated February 3, 1999 (AT&T February 3 *ex parte*). *See also* CTIA February 3 *ex parte*.

administrative overhead to manage data tables listing each subscriber and would necessitate substantial modifications to CMRS billing systems.[89] AT&T argues that MIN/MDN separation provides important network benefits not recognized by TRA and not provided by the LRN relay solution. For example, AT&T contends that MIN/MDN separation facilitates development of systems to support automatic international roaming and permits less costly area code splits for wireless phones because subscriber handsets need not be reprogrammed.[90]

32. We conclude that we do not need to resolve the debate about the technical feasibility of TRA's proposed alternative or its relative technical merits as compared with the MIN/MDN approach in addressing the instant forbearance petition. At the time we imposed LNP requirements on wireless carriers, we determined that the wireless industry should decide on the best approach for addressing the unique technical obstacles to implementing wireless LNP.[91] Based on this decision, CTIA established a wireless industry working group in 1996 that considered several alternatives (including some that were similar in concept to TRA's proposal) and selected MIN/MDN separation as the preferred technical platform for implementing wireless LNP.[92] TRA did not present its proposal to the industry working group at that time, and has presented its proposal only recently in this proceeding and a related proceeding on wireless-wireline integration.[93] Given the extensive comment that TRA's proposal has generated in these proceedings, and the fact that the wireless industry previously considered proposals similar to TRA's in the standards development process, we see no need to seek further public comment on TRA's proposal at this time.

---

[89] CTIA November 30 *ex parte*. *See also* AT&T Wireless February 3 *ex parte*.

[90] AT&T February 3 *ex parte* at 2; *see also* AT&T Reply Comments, filed August 31, 1998 in response to the North American Numbering Council (NANC) Recommendation Concerning Local Number Portability Administration, Wireless and Wireline Integration, NSD File No. L-98-84, at 6.

[91] *See First Report and Order*, 11 FCC Rcd. at 8438, ¶¶ 162-164.

[92] CTIA November 30 *ex parte* at 2. In fact, the wireless industry was already considering MIN/MDN separation prior to the imposition of LNP requirements, based on the development of ANSI standards that treated the MIN and MDN as separable. GTE November 13 *ex parte*. Following the *First Report and Order*, CTIA sponsored an industry forum at which several LNP alternatives, including both 10-digit GTT and MIN/MDN separation, were considered. *See* Number Portability Forum Report, October 9-11, 1996 (attachment to CTIA November 30 *ex parte*). The industry working group concluded that MIN/MDN separation was the preferable approach, and forwarded its recommendation to the TIA and Committee T1 standards bodies in early 1997. *See* CTIA August 25 *ex parte* at 2. *See also* CTIA Number Portability Sub-Task Group Report on Wireless Number Portability, Version 2.0, July 7, 1998 (attachment to CTIA November 30 *ex parte*).

[93] The latter proceeding sought comment on NANC's May 18, 1998 report on wireless-wireline integration issues relating to LNP implementation. *See Public Notice*, Telephone Number Portability and North American Numbering Council (NANC) Recommendation Concerning Local Number Portability Administration, Wireless and Wireline Integration Report, CC Docket 95-116, DA 98-1290, June 10, 1998 (Wireless-Wireline Integration Proceeding). TRA first presented its LRN relay proposal in comments filed in the Wireless-Wireline Integration Proceeding on August 10, 1998. Several wireless carriers filed reply comments in the same proceeding that criticized TRA's proposal on technical grounds. *See* AirTouch Reply Comments, filed August 31, 1998; AT&T Reply Comments, filed August 31, 1998; BellSouth Reply Comments, filed August 31, 1998; PCIA Reply Comments, filed August 31, 1998; SBC Reply Comments, filed August 31, 1998.

33. We continue to believe that the wireless industry, not the Commission, should decide technical issues with respect to implementation of wireless LNP. Even if TRA's proposal is technically viable, we see no reason to compel the wireless industry at this stage in the LNP development process to abandon its substantial efforts to date in favor of a different methodology. We also question whether the LRN relay approach could realistically be submitted to the industry standards bodies, developed, and fully implemented by March 2000, as TRA contends.[94] We find that the weight of the record supports affording the wireless industry additional time to finalize standards, produce software, and deploy number portability in their networks. Finally, even assuming that TRA's proposal would be less costly than MIN/MDN separation, on balance our view remains that given current market conditions, imposing additional costs and technical burdens on the wireless industry under the existing LNP schedule is unnecessary to provide consumer benefits. As discussed below, we conclude that independent of technical considerations, grant of CTIA's petition is warranted on competitive grounds.

34. Competitive Issues. Aside from technical considerations, we believe that extending the March 31, 2000 LNP deadline is also in the public interest on competitive grounds. First, we conclude that implementing number portability by March 31, 2000 is likely to have a relatively small positive impact on wireless-to-wireless competition in the near term, because number portability is not a current priority for wireless consumers.[95] Customer surveys taken by CMRS carriers and industry analysts indicate that price, service area coverage, and service quality are key factors driving consumer choice of wireless carriers.[96] The record also yields little evidence that wireless consumers identify the ability to retain their telephone number as a major factor in their decision to switch wireless carriers.[97] In fact, most wireless subscribers currently do not disseminate their wireless telephone numbers widely because they want to limit incoming calls.[98] Further, the high churn rates associated with wireless carriers suggest that the lack of wireless number portability currently is not a barrier to customers switching wireless carriers.[99] Thus, in the near term, we find that the factors that most influence competition (price, service area coverage, and service quality) may be more positively influenced by

---

[94] CTIA November 30 *ex parte* at 3-4.

[95] 360o Reply Comments at 2; AirTouch Comments at 3; BAM Comments at 3; GTE Comments at 6; PrimeCo Comments at 1; SBC Comments at 2; USCC Comments at 3; Upstate Comments at 1; Western Comments at 3.

[96] *See, e.g.*, "Straight From the Source: The Consumer," RCR Radio Communications Report, September 28, 1998 (survey indicates most important factors for wireless customers are overall value, overall quality, competitive prices, innovative products/services, sound quality, and customer service); "Customer Satisfaction Unstable Among Many Carriers," RCR Radio Communications Report, September 28, 1998 (J.D. Power and Associates survey cites call quality as most important factor for consumers, followed by "pricing options, corporate capability, customer service, credibility and customer communication, roaming and coverage, handset, billing, and cost of roaming").

[97] *See* AirTouch Comments at 4-5; BAM Comments at 13; PrimeCo Comments at 10; Western Comments at 4-6.

[98] *First Report and Order*, 11 FCC Rcd. at 8437, ¶ 161. *Accord* BAM Comments at 13.

[99] *See* note 67, *infra*.

rapid construction of networks and provision of service by new entrants, as opposed to implementing wireless number portability under the existing schedule.

35. We also conclude that enforcing the current implementation schedule is unlikely to advance wireless-to-wireline competition in the near term. Although there are signs that wireless-to-wireline competition is increasing, the ability of wireless communications to substitute for wireline communications is still in its early stages.[100] The price differential between wireless and wireline communications remains high, and aggregate wireline minutes of use (MOUs) are far higher than wireless MOUs.[101] As a result, while wireless use is increasing dramatically, most of the increase has come from subscribers who are using their wireless phones more heavily but have also continued to use their wireline phones for many of their telecommunications needs. Industry analysts suggest that this trend is likely to continue for the next few years with most customers increasing MOUs on their wireless phones rather than seeking to drop wireline service entirely.[102]

36. MCI asserts that forbearing from enforcing number portability requirements for wireless carriers could give them an unfair advantage over wireline carriers in retaining and attracting customers, because wireline carriers will be required to accommodate subscribers who want to port their numbers to CMRS carriers while CMRS carriers will not be required to port subscriber numbers if a subscriber switches to a wireline carrier.[103] We do not believe that limited forbearance will give wireless carriers an unfair advantage. As a practical matter, even though wireline carriers are already required to port numbers to wireless carriers if a request is made, wireless carriers have limited ability to accept ported numbers from wireline carriers until they configure their own networks to support number portability.[104]

---

[100] *Third CMRS Competition Report* at 26-27 ("it is hard to say exactly how long it will take or how much substitution [of wireline for wireless communications] will occur. . . it is difficult to make accurate predictions because there is no relevant behavioral history from which we can draw guidance"). *See also* Application of Bellsouth Corporation, Bellsouth Telecommunications, Inc., and Bellsouth Long Distance, Inc., For Provision of In-region, Interlata Services in Louisiana, CC Docket No. 98-121, FCC 98-271, *Memorandum Opinion and Order* (released Oct. 13, 1998); Application of BellSouth Corporation, et al. Pursuant to Section 271 of the Communications Act of 1934, as Amended, to Provide In-Region, InterLata Services in South Carolina, CC Docket No. 97-208, *Memorandum Opinion and Order*, 13 FCC Rcd. 539 (1997).

[101] *Third CMRS Competition Report* at 27 (citing Yankee Group study that wireline carriers accounted for 98 percent of aggregate MOUs in 1996). *See also* "One-rate Plans Causing Migration?" Wireless Week, October 19, 1998 (current average price of wireless service is 4.9 times wireline price for digital airtime and 6.4 times wireline price for analog, projected to shrink to 2.1 times and 2.9 times, respectively, by 2007).

[102] *See* DLJ Report at 29 (in lieu of full wireline substitution, wireless carriers are moving to bundle wireless and wireline services and drive increase in wireless minutes of use). Nonetheless, an additional factor that may diminish the inclination of some consumers to abandon their wireline telephone service completely for wireless service may be the inability to port the number.

[103] MCI Comments at 6.

[104] CTIA November 30 *ex parte* at 10.

37. In light of these factors, we believe that extending the LNP deadline until November 24, 2002 more appropriately balances the competitive costs and benefits of wireless LNP. The record demonstrates that the costs to the industry of implementing wireless number portability, though not prohibitive, are substantial. Commenters in this proceeding have estimated that it would cost individual carriers, depending on their size, millions of dollars in network upgrade, switch replacement, and changes in back office operations in order to implement wireless number portability.[105] The Yankee Group, an international strategic planning and market research firm, has estimated that the wireless industry as a whole will need to spend up to $1 billion to implement wireless number portability, including software and network modifications.[106]

38. We agree with CTIA that requiring wireless carriers to implement number portability under the current schedule has the potential to divert available financial and technical resources from other initiatives that could have a more immediate impact on competition, such as network buildout. Indeed, our findings in the *Third CMRS Competition Report* suggest that in the next few years, investment in buildout will be critical to broadband CMRS carriers as they seek to improve coverage and service quality in response to growing consumer demand.[107] In addition, CMRS carriers are currently devoting substantial resources to Y2K issues[108] and to other regulatory requirements, such as E911[109] and CALEA,[110] which are designed to meet important public interest needs but likely will result in some additional technical burden. Thus, if carriers are required to implement number portability within the same time frame as these other initiatives, this could slow network buildout and system development efforts necessary to meet these other demands.

---

[105] AirTouch Comments at 2; PrimeCo Comments at 12; Upstate Comments at 2. *See* Letter from Caressa D. Bennet, Counsel to RTG, to Magalie Roman Salas, Secretary, FCC, dated October 21, 1998.

[106] "Carriers That Don't Address Number Portability Will Pay," RCR Radio Communications Report, April 6, 1998 (quoting Yankee Group analyst David Berndt "[o]ver the next three years, carriers may collectively spend up to $1 billion upgrading their networks for number portability. . . .").

[107] *Third CMRS Competition Report* at 3. At the end of 1997, there were approximately 52 million mobile telephone subscribers in the United States, By mid-1998, the figure was 60.8 million, and was projected to reach 68 million by the end of 1998, for an annual growth rate of over 24%. DLJ Report at 9-10.

[108] We have recently recognized the need to avoid regulatory deadlines that would conflict with the telecommunications industry's expenditure of resources to address the Year 2000 problem. See "FCC Adopts Extension of CALEA Compliance Date," WT Report No. 98-33, Joint Statement of Commissioners Ness and Powell (released September 11, 1998).

[109] *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. 18676 (1996); Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Memorandum Opinion and Order*, 12 FCC Rcd. 22665 (1997).

[110] *See* Communications Assistance for Law Enforcement Act, *Notice of Proposed Rulemaking*, CC Docket No. 97-213, 13 FCC Rcd. 3149 (1997); *Further Notice of Proposed Rulemaking*, FCC 98-282 (adopted October 22, 1998; released November 5, 1998).

39. Based on our assessment of the relative benefits of LNP implementation in the near term, we conclude that it is reasonable to grant forbearance until the conclusion of the five year PCS buildout period as requested by CTIA. In this regard, we note that the five year PCS buildout deadline is in fact not uniform for all PCS carriers, because the different blocks of broadband PCS spectrum have been licensed in phases, and some PCS spectrum remains subject to future reauction.[111] However, we conclude that it is appropriate to designate November 24, 2002 as a uniform "benchmark" PCS buildout date for purposes of setting the implementation deadline for wireless LNP. We have previously used this same date in similar fashion in the CMRS Resale proceeding, where we concluded that the CMRS resale rule would "sunset" on November 24, 2002, five years after the last initial group of PCS licenses had been awarded.[112] In the resale context, we established this as the appropriate sunset date because it was reasonable to anticipate that by that date, multiple PCS carriers would have established a competitive presence in each geographic area.[113] We similarly regard November 24, 2002 as a reasonable date for LNP purposes because it marks the point when all but a small percentage of PCS licensees in the top 100 MSAs will have completed their five-year buildout.[114] Thus, use of this date ensures that the vast majority of CMRS carriers subject to LNP requirements will have achieved substantial buildout in these markets while also ensuring that LNP implementation occurs within a reasonable timeframe.

40. While we conclude that the limited forbearance requested by CTIA meets the public interest prong under section 10, we reject the argument made by some commenters that the record supports complete forbearance from enforcing our wireless number portability requirements.[115] We emphasize that the competitive reasons that led us to mandate wireless number portability in the *First Report and Order* remain fundamentally valid: we sought to increase competition both within the CMRS marketplace and with wireline carriers, and found that this competition would provide incentives for all carriers to provide innovative service offerings, higher quality services and lower

---

[111] Broadband PCS licenses in the A and B blocks were granted on June 23, 1995. Thereafter, licenses in the C, D, E, and F blocks were initially granted in 1996 and 1997, with the last group of D, E, and F block initial grants to date occurring on November 24, 1997. A small number of D, E, and F block licenses have not been awarded by the Commission, and will be auctioned beginning on March 23, 1999. In addition, the Commission will conduct its reauction of C block spectrum on that date.

[112] *See* Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, *First Report and Order*, CC Docket No. 94-54, 11 FCC Rcd. 18455, 18468-69, ¶ 24 (1996), *recon. pending* (*CMRS Resale Order*) (CMRS resale rule will sunset five years after grant of last initial group of broadband PCS licenses). *See also*, *Public Notice*, Wireless Telecommunications Bureau, DA 98-1337 (July 2, 1998) (announcing that five year period established by the *CMRS Resale Order* will terminate on November 24, 2002).

[113] *CMRS Resale Order*, 11 FCC Rcd. at 18468-69, ¶ 24.

[114] Only .5% of the D, E, and F block licenses have not been granted to date, while the C block licenses that will be auctioned on March 23, 1999 represent spectrum that was previously licensed and returned under the Commission's orders concerning relief for C block defaulters. We do not include these licenses in our determination of the PCS buildout date because it would create uncertainty with respect to the LNP deadline.

[115] *See, e.g.*, BAM Comments at 4.

prices.[116] We remain committed to the basic regulatory approach outlined in prior orders in this proceeding.

41. We also reject the view espoused by some commenters that if consumer demand for wireless number portability develops, market forces alone are sufficient to ensure its development and implementation.[117] We remain unconvinced that market forces will provide sufficient incentives for widespread implementation. In order for a wireless customer to switch wireless carriers while retaining its phone number, both carriers must have implemented LNP. If certain carriers conclude that they will sustain a net loss in customers overall under a LNP scenario, they will have little, if any, incentive to implement LNP in the absence of a requirement. We also reiterate our view that a regulatory mandate is necessary to the full implementation of wireless number portability, in order for it to support nationwide roaming. The ability to support nationwide roaming requires that all wireless carriers, even those outside major markets, to configure their networks to support number portability, regardless of whether there is consumer demand for LNP among customers in their home markets.[118] Thus, without the establishment of a regulatory requirement, wireless carriers who successfully develop service provider LNP could be unable to offer its full benefits because their customers would not be able to roam on the networks of other wireless carriers that do not support LNP.[119] We believe such a result would not be in the public interest.

42. In addition, a uniform regulatory deadline provides needed certainty to the industry in terms of setting goals, establishing capital budgets, and implementation timetables. While we are granting forbearance today, it is essential that the wireless industry continue to make steady progress on the interim steps necessary to achieve timely implementation of LNP, including final agreement on standards, testing of network hardware and software, and establishing a realistic schedule for deployment. We believe that the action we take today provides the appropriate regulatory framework to enable carriers to efficiently complete these efforts, which we continue to believe are important in the long term to promoting competition in the telecommunications marketplace.

43. Numbering Issues. As several parties have noted, implementation of LNP is a necessary precondition to the implementation of number pooling techniques used to conserve numbers.[120] They argue that an extension of the deadline for CMRS number portability would hamper efforts to address number conservation. Thus, we have considered the effect of our actions here on numbering utilization and conservation.

---

[116] *First Report and Order*, 11 FCC Rcd. at 8434-8436, ¶¶ 157-160.

[117] *See, e.g.*, PrimeCo Reply Comments at 12.

[118] Forbearance Petition at 8 n.15.

[119] BAM Comments at 18-19.

[120] *See, e.g.*, Maine PUC *ex parte*, New York PSC December 10 *ex parte*, New York PSC February 2 *ex parte*, NCUC Staff *ex parte*, Pennsylvania PUC *ex parte*, Texas PUC *ex parte*. *See also* NANC Report, § 4.1.

44. The compelling need for immediate and comprehensive action to improve efficient use of numbering resources is clear.[121] Existing area codes are entering jeopardy and new area codes are being established throughout the country at an alarming rate. Implementing new area codes has a significant effect on consumers, both because it is costly and because it is inconvenient.[122] To illustrate this point, in 1984, the entire North American Numbering Plan had 125 area codes; by December 1994, 134 total area codes had been assigned, which was only an addition of nine new area codes in the space of 10 years.[123] Within the next four years, however, the total number of area codes assigned nearly doubled, so that as of December 1998, 248 geographic area codes had been assigned, of which 207 serve portions of the United States.[124] Currently, approximately 50 area codes throughout the U.S. are in jeopardy.[125]

45. We are mindful, therefore, of the urgent need to address the numbering crisis, and have sought input from the wireless industry in this proceeding on how wireless carriers can ensure efficient utilization of numbering resources during the period that they are not LNP-capable. In this regard, several wireless carriers have provided data regarding their current number utilization, which suggests that these carriers are using a relatively high percentage of their allocated numbering resources in high-density and high-growth markets.[126] Indeed, a number of CMRS providers support

---

[121] *See* Letter and enclosed attachment from Alan C. Hasselwander, Chairman, North American Numbering Council, to Magalie Roman Salas, Secretary, FCC, dated February 8, 1999.

[122] WHERE HAVE ALL THE NUMBERS GONE? LONG-TERM AREA CODE RELIEF POLICIES AND THE NEED FOR SHORT-TERM REFORM, Economics and Technology, Inc., March 1998, at 19-24.

[123] *Id.* at 3.

[124] Letter from Cheryl A. Tritt, Counsel for Lockheed Martin IMS, to Magalie Roman Salas, Secretary, FCC, dated February 4, 1999, attaching Lockheed Martin report, "Number Utilization Forecast and Trends," at 3 (total of 618 geographic area codes available for assignment within the United States; 207 area codes have been assigned so far).

[125] *Id.* at 5. California serves as an example of this problem. As of December 1998, California had a total of 23 area codes; between January 1, 1997, and December 31, 1998, the industry, the California Public Utility Commission, and the North American Numbering Plan Administrator (NANPA) implemented 10 area code relief plans in the state of California alone. *See* Petition for Reconsideration by the California Public Utilities Commission and the People of the State of California, NSD File No. L-97-42, CC Docket No. 96-98, filed November 5, 1998, at 5. Even after adding these new area codes, the majority of California's area codes remain in jeopardy. Other states are experiencing similar problems. For example, in 1996, the Texas Public Utility Commission ordered area code relief in the form of area code splits in Dallas and Houston. This area code relief was projected to last more than five years. Within only one year, however, area code relief was again necessary in Dallas and Houston. *See* Public Utility Commission of Texas Petition for Expedited Waiver of 47 C.F.R. Section 52.19(c)(3)(ii) for Area Code Relief, *Order*, NSD File No. L-98-105, DA 98-2141, at n.33 (released October 23, 1998). Additional information on area code assignments may be found at <http://www.nanpa.com>.

[126] *See, e.g.*, PrimeCo January 6 *ex parte*; SBC December 9 *ex parte*; BellSouth December 22 *ex parte*. *See also* Letter from Todd Silbergeld, SBC, to Yog Varma, Deputy Chief, Common Carrier Bureau, dated January 29, 1999; Letter from Robert L. Hoggarth and Cathy Handley, PCIA, to Magalie Roman Salas, Secretary, FCC, dated January 29, 1999, at 2.

the Commission's efforts to slow the pace of area code exhaust, and increase the efficiency with which numbering resources are allocated and utilized, in large part because they have been hampered in their ability to obtain access to sufficient numbering resources to meet the demand for their services in area codes where jeopardy has been declared.[127]

46. In addition, in response to our request in the *Extension Order*, we have received explicit proposals from the wireless industry to establish utilization thresholds as a prerequisite to the issuance of new central office codes. On January 28, 1999, CTIA filed a proposal for numbering resource optimization, which it urges the Commission to apply to all telecommunications carriers.[128] Specifically, CTIA proposes that the Commission establish minimum number utilization thresholds, by rate center, in jeopardy NPAs, that carriers would need to meet before they could seek additional numbering resources in that rate center.[129] CTIA further suggests that utilization thresholds be calculated by looking at data from "mature" NXX codes, which it defines as NXX codes that have been assigned to, and available for use by, a carrier for at least 90 days. CTIA also makes several proposals regarding definitions for categories of numbers, how these categories should be treated when measuring utilization, certain exceptions to the thresholds it has outlined, and audit procedures. Several wireless carriers have indicated their support for CTIA's proposal.[130] While Sprint PCS has indicated its general support for the CTIA proposal, despite its belief that a months-to-exhaust standard is preferable to a utilization threshold, it proposes a tiered utilization approach that would account for the different circumstances that smaller or newer carriers face, with their correspondingly smaller inventory of NXX codes.[131] Primeco PCS also endorses use of a months-to-exhaust standard, but has indicated that if a utilization threshold is ultimately adopted, it would support a utilization range that would explicitly account for seasonal variations in number usage and demand.[132]

47. We believe that the proposals submitted by wireless carriers are helpful, and they demonstrate that there are certain number conservation techniques that are not LNP-based that can be

---

[127] *See* Letter from Jonathan Chambers, Sprint PCS, to Yog Varma, Deputy Chief, Common Carrier Bureau, dated January 29, 1999, at 9 (Sprint January 29 *ex parte*).

[128] Letter from Michael Altschul, CTIA, to Yog Varma, Deputy Chief, Common Carrier Bureau, dated January 28, 1999, attaching "CTIA Numbering Proposal."

[129] *Id.* CTIA specifically proposes a minimum rate center utilization rate of 60%, which would increase to 65% on July 1, 2000 and to 70% on July 1, 2001.

[130] *See, e.g.,* Letter from Pamela Riley, AirTouch, to Yog Varma, Deputy Bureau Chief, Common Carrier Bureau, dated January 29, 1999; Letter from Todd F. Silbergeld, SBC Communications, Inc., to Yog Varma, Deputy Bureau Chief, Common Carrier Bureau, dated January 29, 1999; Letter from John T. Scott, III, Counsel for BAM, to Yog Varma, Deputy Bureau Chief, Common Carrier Bureau, dated February 1, 1999 (endorsing CTIA's proposal only as applied to wireless carriers).

[131] Sprint January 29 *ex parte* at 7. Sprint PCS also proposes that the assignment of "special use" NXX codes be prohibited during a jeopardy condition.

[132] Specifically, Primeco proposes a utilization threshold range of 60% to 75% that varies by quarter as follows: first quarter level is 70%, second quarter level is 75%; third quarter level is 60%, and fourth quarter level is 65%. *See* Primeco January 7 *ex parte*, attachment at 8.

implemented during the period in which CMRS carriers have been relieved from their current obligation to implement LNP. We also believe that the record developed with respect to wireless number utilization in this proceeding underscores the need for further development of the record with respect to number utilization by all carriers, including other carriers such as LECs outside the top 100 MSAs who are not yet LNP capable, and the need to develop comprehensive rules that prevent inefficient use of this critical resource. As an initial step, we therefore intend to issue within the next several months a Notice of Proposed Rulemaking that will propose certain non-LNP-based numbering resource optimization requirements applicable to all sectors of the telecommunications industry that use numbering resources. Specifically, we intend to develop rules that will establish more control over number administration, such as by requiring both wireline and wireless carriers to justify their needs for new numbers, for example, by demonstrating that they have reached threshold utilization levels for numbering resources that they currently hold.

48. Finally, while we find that the public interest in efficient use of numbering resources is not harmed by this limited extension of the LNP deadline, we note that the public interest could be jeopardized if CMRS carriers cannot participate in LNP-based conservation techniques such as number pooling after this revised deadline.[133] From the outset of our Number Portability docket, we have explicitly noted that one of the public interest benefits of LNP is its potential to further the efficient use of numbering resources.[134] Although the Commission has not yet adopted pooling requirements, several state public utility commissions have already implemented number pooling trials, which have necessarily excluded CMRS.[135] Therefore, in addition to proposing utilization thresholds, as noted above, we also intend to move rapidly forward to develop national standards for a variety of other number conservation methods, possibly including one or more pooling methods. Should the Commission adopt number pooling requirements in a rulemaking proceeding, our decision to grant forbearance in this instance in no way is intended to limit our ability to require wireless participation in pooling at an earlier date, if doing so were necessary to address specific number exhaust problems. Our decision to grant forbearance similarly does not limit our ability to invoke number exhaust remedies that may provide relief only for carriers that are LNP-capable.

IV. CONCLUSION

49. We believe that granting forbearance until the conclusion of the five year PCS buildout period is appropriate under the section 10 forbearance standard, and is consistent with our

---

[133] We have previously recognized that number pooling "should result in significant efficiencies in [number] administration and use." 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, *Memorandum Opinion and Order and Order on Reconsideration*, CC Docket No. 96-98, 13 FCC Rcd. 19009, 19024, ¶ 26 (1998).

[134] Telephone Number Portability, *Notice of Proposed Rulemaking*, CC Docket No. 95-116, 10 FCC Rcd. 12350, 12362, ¶ 31 (1995); *First Report and Order*, 11 FCC Rcd. at 8350, 8431-32, ¶¶ 36-37, 153.

[135] For example, Illinois has been conducting a number pooling trial since 1997, and New York's number pooling trial began in July 1998. *See* NANC Report, Attachments 3-4 and 3-5.

previous findings that CMRS number portability will foster increased competition in the wireless marketplace.[136] Extension of the deadline will provide the industry with the flexibility to allocate its immediate resources toward network construction -- a goal proven to promote a competitive marketplace. We do not view this new implementation schedule, however, as relieving CMRS carriers of their underlying obligation to implement wireless number portability. We fully expect that the industry will continue its work toward implementation and will reach significant milestones during this interim period. We will also maintain the monitoring and reporting requirements established in the *First Report and Order* to ensure the timely implementation of wireless number portability.[137]

V. ORDERING CLAUSES

50. Accordingly, IT IS ORDERED THAT Part 52 of the Commission's Rules IS AMENDED as specified in Appendix A, effective 30 days after publication in the Federal Register.

51. Additionally, IT IS ORDERED THAT, pursuant to sections 4(i) and 10 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i) and 160, the Petition for Forbearance filed by the Cellular Telecommunications Industry Association on December 16, 1997 is GRANTED to the extent stated herein.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas

Magalie Roman Salas
Secretary

[136] *First Report and Order*, 11 FCC Rcd. at 8433-34, ¶¶ 152-157, *Order on Reconsideration*, 12 FCC Rcd. at 7312, ¶ 134.

[137] *First Report and Order*, 11 FCC Rcd. at 8440, ¶ 166.

APPENDIX A

REVISED CMRS NUMBER PORTABILITY IMPLEMENTATION SCHEDULE

§ 52.31 Revised Deployment of long-term database methods for number portability by CMRS providers

(a) By **November 24, 2002**, all cellular, broadband PCS, and covered SMR providers must provide a long-term database method for number portability, in the MSAs identified in the appendix to this part in compliance with the performance criteria set forth in § 52.23(a), in switches for which another carrier has made a specific request for the provision of number portability, subject to paragraph (a)(1) of this section.

(1) Any procedure to identify and request switches for development of number portability must comply with the following criteria:

(i) Any wireline carrier that is certified (or has applied for certification) to provide local exchange service in a state, or any licensed CMRS provider, must be permitted to make a request for deployment of number portability in that state;

(ii) For the MSAs identified in the appendix to this part, carriers must submit requests for deployment by **November 24, 2002**;

(iii) A cellular, broadband PCS, or covered SMR provider must make available upon request to any interested parties a list of its switches for which number portability has be requested and a list of its switches for which number portability has not been request;

(iv) After **November 24, 2002**, a cellular, broadband PCS, or covered SMR provider must deploy additional switches serving the MSAs identified in the Appendix to this part upon request within the following time frames:

(A) For remote switches supported by a host switch equipped for portability ("Equipped Remote Switches"), within 30 days;

(B) For switches that require soft ware but not hardware changes to provide portability ("Hardware Capable Switches"), within 60 days;

(C) For switches that require hardware changes to provide portability ("Capable Switches Requiring Hardware"), within 180 days; and

(D) For switches not capable of portability that must be replaced ("Non-Capable Switches"), within 180 days.

(v) Carriers must be able to request deployment in any wireless switch that serves any area within the MSA, even if the wireless switch is outside that MSA, or outside any of the MSAs identified in the Appendix to this part.

(2) By **November 24, 2002** all cellular, broadband PCS, and covered SMR providers must be able to support roaming nationwide.

(b) By **December 31, 1998**, all cellular, broadband PCS, and covered SMR providers must have the capability to obtain routing information, either by querying the appropriate database with other carriers that are capable of performing database queries, so that they can deliver calls from their networks to any party that has retained its number after switching from one telecommunications carrier to another.

(c) The Chief, Wireless Telecommunications Bureau, may waive or stay any of the dates in the implementation schedule, as the Chief determines is necessary to ensure the efficient development of number portability, or a period not to exceed 9 months (*i.e*, no later than September 30, 1999, for the deadline in paragraph (b) of this section, and no later than March 31, 2000, for the deadline in paragraph (a) of this section).

(d) In the event a carrier subject to paragraphs (a) and (b) of this section is unable to meet the Commission's deadlines for implementing a long-term number portability method, it may file with the Commission at least 60 days in advance of the deadline a petition to extend the time by which implementation in its network will be completed. A carrier seeking such relief must demonstrate through substantial, credible evidence the basis for its contention that it is unable to comply with paragraphs (a) and (b) of this section. Such requests must set forth:

(1) The facts that demonstrate why the carrier is unable to meet our deployment schedule;

(2) A detailed explanation of the activities that the carrier has undertaken to meet the implementation schedule prior to requesting an extension of time;

(3) An identification of the particular switches for which the extension is requested;

(4) The time within which the carrier will complete deployment in the affected switches; and

(5) A proposed schedule which mile-stones for meeting the deployment date.

(e) The Chief, Wireless Telecommunications Bureau, may establish reporting requirements in order to monitor the progress of cellular, broadband PCS, and covered SMR providers implementing number portability, and may direct such carriers to take any actions necessary to ensure compliance with this deployment schedule

APPENDIX B

LIST OF COMMENTERS AND SHORT-FORM CITATIONS USED

Comments - Filed February 23, 1998

AirTouch Communications, Inc. (AirTouch)
American Mobile Telecommunications Association, Inc. (AMTA)
Bell Atlantic Mobile, Inc. (BAM)
GTE Service Corporation (GTE)
MCI Telecommunications Corporation (MCI)
Microcell Telecommunications Inc. (Microcell)
Nextel Communications, Inc. (Nextel)
Paging Network, Inc. (PageNet)
Personal Communications Industry Association, Inc. (PCIA)
PrimeCo Personal Communications, L.P. (PrimeCo)
Rural Telecommunications Group (RTG)
Southwestern Bell Mobile Systems, Inc. (SBC)
Telecommunications Resellers Association (TRA)
United States Cellular Corporation (USCC)
Upstate Cellular Network (Upstate)
Western Wireless Corporation (Western)
Worldcom, Inc. (WorldCom)

Reply Comments - Filed March 10, 1998

360o Communications Company (360o)
Association for Local Telecommunications Services (ALTS)
Bell Atlantic Mobile, Inc. (BAM)
BellSouth Telecommunications, Inc. (BellSouth)
Cellular Telecommunications Industry Association (CTIA)
Century Cellunet, Inc. (Century)
GTE Service Corporation (GTE)
MCI Telecommunications Corporation (MCI)
Nextel Communications, Inc. (Nextel)
PrimeCo Personal Communications, L.P. (PrimeCo)
Rural Telecommunications Group (RTG)
Worldcom, Inc. (WorldCom)

Ex Partes

Parties submitting *ex parte* presentations in WT Docket 98-229/CC Docket 95-116

AT&T
AirTouch
America One Communications
Bell Atlantic

BellSouth
CTIA
Ericsson
GTE
Alan Hasselwander, Chairman, North American Numbering Council
Lockheed Martin IMS
Maine Public Utilities Commission
MCI
Motorola
New York Public Service Commission
Nextel
North Carolina Utilities Commission Staff
Pennsylvania Public Utility Commission
Public Utility Commission of Texas
Rural Cellular Association
RTG
SBC
TRA

Parties submitting *ex parte* presentations in NSD File No. L-98-134 (NANC Report Concerning Telephone Number Pooling and Other Optimization Measures)[138]

AirTouch
BellSouth
CTIA
Lockheed Martin IMS
Nextel
PCIA
PrimeCo
SBC
Sprint

[138] These *ex partes* will be incorporated into the records of WT Docket 98-229 and CC Docket 95-116.