

FCC MAIL ROOM COPY ORIGINAL

Federal Communications Commission August 27 12 54 PM '97 FCC 97-289

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

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

SECOND REPORT AND ORDER

Adopted: August 14, 1997

Released: August 18, 1997

By the Commission:

TABLE OF CONTENTS

	<u>Paragraph No.</u>
I. INTRODUCTION .....	1
II. BACKGROUND .....	4
A. The First Report & Order and First Order on Reconsideration .....	4
B. Long-Term Number Portability Architecture .....	7
C. The North American Numbering Council .....	10
III. ISSUES .....	16
A. Local Number Portability Databases .....	16
B. Technical and Operational Standards .....	45
C. Numbering Information Sharing .....	83
D. Number Portability and CMRS Providers .....	87
E. Local Number Portability Oversight Procedures .....	93
IV. ORDERING CLAUSES .....	133
Appendix A List of Parties	
Appendix B Final Rules	
Appendix C Regulatory Flexibility Analysis	

## I. INTRODUCTION

1. On June 27, 1996, the Commission adopted the *First Report and Order and Further Notice of Proposed Rulemaking (First Report & Order)*<sup>1</sup> in the above-captioned docket. The *First Report & Order* established rules designed to implement section 251(b) of the Communications Act of 1934, as amended (the Act), which requires all local exchange carriers (LECs) to offer, "to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission."<sup>2</sup> Among other things, in the *First Report & Order*, the Commission directed the North American Numbering Council (NANC)<sup>3</sup> to make recommendations regarding specific aspects of local number portability implementation.<sup>4</sup>

---

<sup>1</sup> *Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8352 (1996) (*First Report & Order*), recon. pending.

<sup>2</sup> 47 U.S.C. § 251(b)(2). This requirement was added by the Telecommunications Act of 1996, Public L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. §§ 151 *et. seq.* (1996 Act).

<sup>3</sup> The NANC is a federal advisory committee established pursuant to the Federal Advisory Committee Act, 5 U.S.C. app. 2 (1988). The NANC was originally established to assist in adopting a new model for administration of the North American Numbering Plan and to provide advice and recommendations to the Commission on numbering issues. The NANC also seeks to ensure that number administration is impartial and pro-competitive, while continuing to maintain and foster an integrated approach to number administration throughout North America. See *Charter of the North American Numbering Council*, approved Oct. 5, 1995, on file with Network Services Division, Common Carrier Bureau, FCC (NANC Charter). The voting members of the NANC include the following entities from various sectors of the telecommunications industry: Association for Local Telecommunications Services (ALTS), American Petroleum Institute (API), American Mobile Satellite Corp. (AMSC), American Public Communications Council, Inc. (APCC), AT&T, AT&T Canada, Cable & Wireless, Cincinnati Bell Telephone, Competitive Telecommunications Association (Comptel), Cellular Telephone Industry Association (CTIA), Eastern TeleLogic Corp., Frontier, GTE, MCI, Mobility Canada, National Association of Regulatory Utility Commissioners (NARUC), National Cable Television Association (NCTA), Nextel, Northern Telecom, NYNEX, Omnipoint, Organization for the Protection and Advancement of Small Telephone Companies (OPASTCO), Personal Communications Industry Association (PCIA), SBC Communications, Inc. (SBC), Scherer Communications, Sprint Spectrum, Sprint Corp., Stentor Resource Centre, Teleport Communications Group (Teleport), Telecommunications Industry Association (TIA), and United States Telephone Association (USTA). See *FCC Establishes North American Numbering Council Advisory Committee, Announces Members, and Sets Initial Meeting Date*, Public Notice, CC Docket No. 92-237, DA 96-1495 (rel. Sept. 5, 1996) (Establishment of the NANC Public Notice). See also <http://www.fcc.gov/ccb/Nanc>.

<sup>4</sup> See *First Report & Order*, 11 FCC Rcd at 8401, ¶ 93.

2. The NANC forwarded its recommendations to the Commission on May 1, 1997, in a report from its Local Number Portability Administration Selection Working Group, dated April 25, 1997 (*Working Group Report*).<sup>5</sup> On May 2, 1997, the Commission's Common Carrier Bureau issued a Public Notice seeking comment on the NANC's local number portability recommendations.<sup>6</sup> Eight parties filed comments, and seven parties filed reply comments.<sup>7</sup> Although several incumbent LECs take exception to the NANC's proposals related to the oversight and management of the local number portability databases,<sup>8</sup> and the Cellular Telecommunications Industry Association (CTIA) contends that the NANC recommendations do not fully address concerns of commercial mobile radio service (CMRS) providers subject to the Commission's number portability requirements,<sup>9</sup> commenting parties generally support the NANC's recommendations and call for swift adoption of these recommendations by the Commission.<sup>10</sup>

3. In this *Second Report & Order*, the Commission adopts the recommendations of the NANC as set forth in the *Working Group Report*, with the modifications discussed below. Specifically, we (1) adopt the NANC's recommendation that seven regional number portability databases be established coinciding with the boundaries of the seven original Bell Operating Company (BOC) regions; (2) adopt the NANC's recommendation that Lockheed Martin IMS (Lockheed Martin) and Perot Systems, Inc. (Perot Systems) serve as the

---

<sup>5</sup> See Letter from Alan C. Hasselwander, Chairman, NANC, to Reed Hundt, Chairman, FCC, CC Docket No. 95-116 (May 1, 1997), transmitting the *Working Group Report*.

<sup>6</sup> *North American Numbering Council (NANC) Issues Recommendations Regarding The Implementation of Telephone Number Portability; 60 Day Time Period During Which States May Elect To Opt Out of Regional Database System Commences; Common Carrier Bureau Seeks Comments on the NANC's Recommendations*, Public Notice, CC Docket No. 95-116 (rel. May 2, 1997) (NANC Recommendations Phase Public Notice). A copy of the NANC Recommendations Phase Public Notice was published in the Federal Register on May 8, 1997. See 62 Fed. Reg. 25157 (1997).

<sup>7</sup> A list of parties filing comments and reply comments in response to the NANC Recommendations Phase Public Notice is attached as Appendix A.

<sup>8</sup> See, e.g., Bell Atlantic/NYNEX Comments at 1-7; USTA Comments at 3-4; Bell Atlantic/NYNEX Reply Comments at 1-3; GTE Reply Comments at 1-3; BellSouth Reply Comments at 1-5. See ¶ 102, *infra*.

<sup>9</sup> CTIA Comments at 1-4; see ¶¶ 87 - 92. *infra*. We note that cellular, broadband personal communications services (PCS), and covered specialized mobile radio (SMR) providers are the CMRS providers subject to the Commission's number portability requirements. See ¶ 6, *infra*.

<sup>10</sup> See, e.g., AT&T Comments at 1; ALTS Comments at 1; Bell Atlantic/NYNEX Comments at 1; USTA Comments at 3.

administrators for the regional number portability databases; (3) adopt the technical and operational standards proposed by the NANC for the provision of number portability by wireline carriers; (4) require that the carrier immediately preceding the terminating local exchange carrier be responsible for ensuring that number portability databases are queried; (5) permit LECs to block calls that have not been queried when failure to do so is likely to impair network reliability; (6) direct the NANC to complete and submit to the Commission recommendations on the sharing of numbering information between the regional number portability database administrators and the North American Numbering Plan Administrator; (7) direct the NANC to develop standards and procedures regarding the provision of number portability by CMRS providers; (8) adopt, on an interim basis only, the NANC's recommendation that the regional limited liability companies (LLCs), already established by carriers in each of the original BOC regions, manage and oversee the local number portability administrators, subject to review by the NANC; (9) direct the NANC to provide national-level oversight of local number portability administration; and (10) adopt the NANC's recommendation that the Commission create a committee to oversee number portability deployment in the top 100 Metropolitan Statistical Areas.

## II. BACKGROUND

### A. The First Report & Order and First Order on Reconsideration

4. The Telecommunications Act of 1996, which became law on February 8, 1996, was designed in large part to open local exchange markets to competition by removing existing statutory, regulatory, and operational barriers that have thwarted the ability of new entrants to provide competitive local telecommunications services. One of the most significant steps that Congress took to effectuate this goal was to require all LECs, both incumbents and new entrants, to provide number portability in accordance with requirements prescribed by the Commission.<sup>11</sup> The 1996 Act defines "number portability" as "the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another."<sup>12</sup> Number portability is essential to meaningful facilities-based competition in the provision of local exchange service because survey data show that customers are reluctant to switch carriers if they must change telephone numbers.<sup>13</sup> In practical terms, the benefits of competition will not be realized if

---

<sup>11</sup> 47 U.S.C. § 251(b)(2).

<sup>12</sup> 47 U.S.C. § 153(30).

<sup>13</sup> See *First Report & Order*, 11 FCC Rcd at 8367-68, ¶¶ 28-29.

new facilities-based entrants are unable to win customers from incumbent providers as a result of economic or operational barriers.

5. The *First Report & Order* requires that all LECs begin a phased deployment of a long-term service provider local number portability method in the 100 largest Metropolitan Statistical Areas (MSAs)<sup>14</sup> no later than October 1, 1997, and complete deployment in those MSAs by December 31, 1998.<sup>15</sup> In the *First Memorandum Opinion and Order on Reconsideration*,<sup>16</sup> the Commission modified this schedule, extending the completion dates for the first two phases of the implementation schedule and clarifying that, within the 100 largest MSAs, LECs need only provide number portability in switches for which another carrier has made a specific request for the provision of portability.<sup>17</sup>

---

<sup>14</sup> Metropolitan Statistical Areas (MSAs) are geographic areas designated by the Bureau of Census for purposes of collecting and analyzing census data. The boundaries of MSAs are defined using statistics that are widely recognized as indicative of metropolitan character. See *Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket No. 87-313, Memorandum Opinion and Order, FCC 97-168 (rel. May 30, 1997), at ¶ 17 n.26.

<sup>15</sup> The Commission required deployment in one specified MSA in each of the BOC regions by the end of fourth quarter 1997 ("Phase I"), 16 additional specified MSAs by the end of first quarter 1998 ("Phase II"), 22 additional specified MSAs by the end of second quarter 1998 ("Phase III"), 25 additional specified MSAs by the end of third quarter 1998 ("Phase IV"), and 30 additional specified MSAs by the end of fourth quarter 1998 ("Phase V"). *First Report & Order*, 11 FCC Rcd at 8393, 8501-02, ¶ 77, App. F.

<sup>16</sup> *Telephone Number Portability*, First Memorandum Opinion and Order on Reconsideration, CC Docket 95-116, FCC 97-94 (rel. March 11, 1997) (*First Order on Reconsideration*), further recon. pending. The *First Order on Reconsideration* addressed three primary issues. First, the Commission concluded that Query on Release is not an acceptable long-term number portability method because it violates one of the performance criteria established in the *First Report & Order*. Second, the Commission extended the long-term number portability implementation schedule for wireline carriers, clarified the requirements imposed thereunder, and addressed issues related to rural LECs and certain other parties. Third, the Commission affirmed and clarified the long-term number portability implementation schedules for CMRS providers. See *First Order on Reconsideration* at ¶ 1.

<sup>17</sup> *First Order on Reconsideration* at ¶¶ 60, 78, 80. Pursuant to the revised implementation schedule, Phase I will take place from October 1, 1997, through March 31, 1998, and Phase II will take place from January 1, 1998, through May 15, 1998. *Id.* at ¶¶ 78-80.

6. The Commission established a separate implementation schedule for CMRS providers.<sup>18</sup> Specifically, the Commission required that all cellular, broadband PCS, and covered SMR carriers have the capability of querying the appropriate number portability database systems in order to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998.<sup>19</sup> In addition, CMRS providers subject to the Commission's local number portability requirements must offer number portability throughout their networks, including the ability to support roaming, by June 30, 1999.<sup>20</sup> In the *First Order on Reconsideration*, the Commission recognized that "the wireless industry has lagged behind the wireline industry in developing a method for providing number portability, and that the wireless industry faces special technical challenges in doing so."<sup>21</sup> We found, however, that the deadlines established in the *First Report & Order* account for the current stage of technological development in the wireless industry and should provide CMRS providers enough time to implement the upgrades necessary to perform queries in order to complete calls to ported numbers and to implement number portability for their own subscribers.<sup>22</sup> As a result, we declined to extend the implementation schedule for CMRS providers.<sup>23</sup>

#### B. Long-Term Number Portability Architecture

7. In addition to setting an implementation schedule, the Commission concluded that "establishing performance criteria that a LEC's number portability architecture must meet would better serve the public interest than choosing a particular technology or specific

---

<sup>18</sup> *First Report & Order*, 11 FCC Rcd at 8439-40, ¶ 165. We note that Bell Atlantic NYNEX Mobile has petitioned the United States Court of Appeals for the District of Columbia to set aside the rules set forth in the *First Report & Order* and the *First Order on Reconsideration* that impose number portability obligations on CMRS providers. *Bell Atlantic NYNEX Mobile, Inc. v. Federal Communications Commission and United States*, No. 97-1378 (D.C. Cir. May 30, 1997).

<sup>19</sup> *First Report & Order*, 11 FCC Rcd at 8439-40, ¶ 165.

<sup>20</sup> *Id.* at 8440, ¶ 166.

<sup>21</sup> *First Order on Reconsideration* at ¶ 134.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

architecture."<sup>24</sup> The Commission also made two other important determinations in the *First Report & Order* regarding an appropriate long-term number portability solution. First, the Commission found that a long-term number portability method that uses regionally-deployed databases would best serve the public interest.<sup>25</sup> Second, the Commission determined that such databases should be administered by one or more neutral third parties.<sup>26</sup>

8. Although the Commission did not mandate a specific local number portability method, the NANC, the industry and the state/regional workshops have chosen the Location Routing Number solution (LRN) as the preferred method of providing long-term number portability.<sup>27</sup> Under the LRN method, a unique 10-digit number, or "location routing number" is assigned to each central office switch to identify each switch in the network for call routing purposes. The location routing number then serves as a network address. A database is used to store the routing information for end users who have ported their telephone numbers to another LEC.<sup>28</sup> The database contains the directory numbers of all ported subscribers and the location routing numbers of the switches that serve them. Carriers routing telephone calls to customers who have ported their telephone numbers from

---

<sup>24</sup> *First Report & Order*, 11 FCC Rcd at 8377, ¶ 46. Specifically, the Commission determined that any long-term number portability method, including call processing scenarios or triggering, must: (1) support existing networking services, features, and capabilities; (2) efficiently use numbering resources; (3) not require end users to change their telecommunications numbers; (4) not require telecommunications carriers to rely on databases, other network facilities, or services provided by other telecommunications carriers in order to route calls to the proper termination point; (5) not result in unreasonable degradation in service quality or network reliability when implemented; (6) not result in any degradation of service quality or network reliability when customers switch carriers; (7) not result in a carrier having a proprietary interest; (8) be able to accommodate location and service portability in the future; and (9) have no significant adverse impact outside the areas where number portability is deployed. *Id.*, 11 FCC Rcd at 8378, ¶ 48. The Commission eliminated criterion (4) in the *First Order on Reconsideration*, finding it "unworkable" because "all interconnected carriers are likely to rely upon each other's networks to some extent to process and route calls in a market in which a long-term number portability method has been deployed." *First Order on Reconsideration* at ¶ 19.

<sup>25</sup> *First Report & Order*, 11 FCC Rcd at 8399-8400, ¶ 91.

<sup>26</sup> *Id.* at 8400-01, ¶ 92.

<sup>27</sup> See *First Order on Reconsideration* at ¶¶ 8-10; See also *Working Group Report* at Appendix D -- "Architecture & Administrative Plan for Local Number Portability" at § 7.2 (*Architecture Task Force Report*).

<sup>28</sup> We use the term "port" in this context to mean the transfer of a telephone number from one carrier's switch to another carrier's switch, which enables a customer to retain his or her number when transferring from one local service provider to another.

one carrier to another query the local Service Management System (SMS)<sup>29</sup> database to obtain the location routing number that corresponds to the dialed telephone number. This database query is performed for all calls to switches from which at least one number has been ported. Based on the location routing number, the querying carrier then would route the call to the carrier serving the ported number.<sup>30</sup>

9. In order to port telephone numbers between local service providers, the local Service Management System database must always contain the routing information for all ported numbers in the local calling area. As such, the local Service Management System database must be updated frequently as customers switch service providers. The regional Number Portability Administration Center Service Management System<sup>31</sup> database, administered by a local number portability administrator, serves as the master database containing the routing information for all ported numbers in an entire region of the country. The Number Portability Administration Center Service Management System periodically

---

<sup>29</sup> A Service Management System is a database or computer system not part of the public switched network that, among other things: (1) interconnects to a service control point (SCP) and sends to that SCP the information and call processing instructions needed for a network switch to process and complete a telephone call; and (2) provides telecommunications carriers with the capability of entering and storing data regarding the processing and completing of a telephone call. *First Report & Order*, 11 FCC Rcd at 8402, ¶ 95 n.288. An SCP is a database in the public switched network that contains information and call processing instructions needed to process and complete a telephone call. The network switches access an SCP to obtain such information. Typically, the information contained in an SCP is obtained from the SMS. *Id.*

Local Service Management Systems are the databases that carriers will regularly access to determine if a telephone number has been ported. The Number Portability Administration Center Service Management Systems (NPAC SMSs) are the regional databases maintained by the local number portability administrators, which contain the lists of ported telephone numbers. These lists of ported numbers are periodically transmitted from the NPAC SMS to the local Service Management Systems for querying by the service providers.

<sup>30</sup> *First Report & Order*, 11 FCC Rcd at 8494, Appendix E-1.

<sup>31</sup> The Number Portability Administration Center Service Management System is a hardware and software platform that will contain the database of information required to effect the porting of telephone numbers. In general, the Number Portability Administration Center Service Management System will receive customer information from both the old and new service providers, validate the information received, and download the new routing information when an "activate" message is received indicating that the customer has been physically connected to the new service provider's network. The Number Portability Administration Center Service Management System will contain a record of all ported numbers and a history file of all transactions relating to the porting of a number. The Number Portability Administration Center Service Management System will also provide audit functionality and the ability to transmit routing information to service providers to maintain synchronization of the service providers' network elements that support portability. *Technical and Operational Task Force Report* at § 8.2.

downloads ported number routing information to local Service Management System databases so that carriers can query the local Service Management System databases to determine whether a number has been ported and how to route calls.<sup>32</sup>

### C. The North American Numbering Council

10. In the *First Report & Order*, the Commission directed the NANC to recommend one or more independent, non-governmental entities that are not aligned with any particular telecommunications segment, to serve as local number portability administrator(s).<sup>33</sup> The Commission also directed the NANC to make recommendations regarding the administration selection process, the duties of local number portability administrator(s), the location of regional databases, the overall national architecture, and technical specifications for the regional databases.<sup>34</sup> In directing the NANC to develop these local number portability standards and procedures, the Commission sought "to ensure consistency and to provide a national perspective on number portability issues, as well as to reduce the costs of implementing a national number portability plan."<sup>35</sup>

11. The NANC held its first meeting addressing local number portability issues on October 1, 1996.<sup>36</sup> At this meeting, the NANC established the Local Number Portability Administration Selection Working Group (Working Group) to review and to make recommendations regarding the administration and operation of local number portability.<sup>37</sup>

---

<sup>32</sup> *Architecture Task Force Report* at § 7.12.

<sup>33</sup> *First Report & Order*, 11 FCC Rcd at 8401, ¶ 93.

<sup>34</sup> *Id.* at 8402-03, ¶ 95.

<sup>35</sup> *Id.* at 8401, ¶ 93.

<sup>36</sup> *Working Group Report* at § 2.1.2 n.3.

<sup>37</sup> *Id.* at § 2.1.2. The participants in the Working Group include: AirTouch Communications, Ameritech, APCC, Inc., AT&T, Bell Atlantic, Bellcore, BellSouth, BellSouth Wireless, California Public Utilities Commission, Cox, Florida Public Service Commission, Frontier, GTE, Interstate Fibernet, Lucent Technologies, Maryland Public Service Commission, MCI, Nextel, Nortel, NYNEX, Ohio Public Utilities Commission, PACE Long Distance Service, Competitive Telecommunications Association (Comptel), Pacific Bell, Perot Systems, SBC, Selectronics, Sprint, Sprint PCS, Personal Communications Industry Association (PCIA), Stentor, Telefonica de Puerto Rico, Teleport, Time Warner, National Cable Television Association (NCTA), US West, United States Telephone Association, and WorldCom. *Working Group Report* at Appendix A-1.

12. In particular, the Working Group assumed responsibility for the following tasks:
- (a) determining the neutral third party or parties to act as the local number portability administrator(s);
  - (b) determining whether one or multiple local number portability administrator(s) should be selected;
  - (c) determining the requirements for selecting local number portability administrator(s);
  - (d) defining the duties of the local number portability administrator(s);
  - (e) determining the geographic coverage of the regional databases;
  - (f) developing technical standards, including interoperability operational standards, network interface standards and technical specifications for the number portability databases; and
  - (g) developing guidelines and standards by which the North American Numbering Plan Administrator (NANPA) and the local number portability administrator(s) share numbering information in order to promote efficient use of numbering resources.<sup>38</sup>

In order to satisfy these responsibilities, the Working Group established two task forces -- the Local Number Portability Administration Architecture Task Force (Architecture Task Force)<sup>39</sup> and the Local Number Portability Administration Technical & Operational Requirements Task Force (Technical & Operational Task Force).<sup>40</sup> The Working Group and

---

<sup>38</sup> *Working Group Report* at § 2.2.2. The NANPA was established to process number assignment applications, maintain administrative number databases, and handle central office code administration, in order to foster efficient and impartial number administration. *Administration of the North American Numbering Plan, Report and Order*, 11 FCC Rcd 2588, 2590, 2615, 2619, ¶¶ 1-2, 62, 73 (1995) (*Numbering Plan Order*).

<sup>39</sup> The members of the Architecture Task Force include: AirTouch, Ameritech, AT&T, Bell Atlantic, Bellcore, BellSouth, BellSouth Wireless, California Public Utilities Commission, Cox, GTE, Illinois Commerce Commission, Interstate Fibernet, Lucent Technologies, MCI, Nortel, NYNEX, Ohio Public Utilities Commission, OPASTCO, Pacific Bell, Perot Systems, Sprint, SBC, Time Warner, NCTA, and US West Wireless. *Working Group Report* at Appendix A-2.

<sup>40</sup> *Working Group Report* at § 6.7; *Working Group Report* at Appendix E -- "LNPA Technical & Operational Requirements Task Force Report" § 1.2 (*Technical & Operational Task Force Report*). The members of the Technical & Operational Task Force include: Ameritech, AT&T, Bell Atlantic, Bellcore, BellSouth, BellSouth Wireless, California Public Utilities Commission, Cox, EDS, GTE, IBM, Illuminet/ITN, Interstate Fibernet, Lockheed Martin, Lucent Technologies, MCI, NYNEX, OPASTCO, Pacific Bell, Perot Systems, Pocketcom/CTA, SBC, Sprint, Telecom Software Enterprises, Teleport, Time Warner, NCTA, US West, WinStar, and WorldCom. *Working Group Report* at Appendix A-3.

its task forces met regularly to assist the NANC in making its recommending to the Commission.<sup>41</sup>

13. The Working Group and task forces made decisions by consensus, which did not require unanimous consent, but the Working Group could not reach consensus if the majority of an affected industry segment disagreed.<sup>42</sup> An entity could exercise only one vote on any given issue before the Working Group and task forces.<sup>43</sup> Members elected co-chairs from the incumbent LEC and competitive LEC segments of the industry to administer Working Group activities and determine consensus when required.<sup>44</sup> The Working Group escalated issues to the NANC Steering Committee and/or the full NANC when it could not reach consensus.<sup>45</sup>

14. The activities of the Working Group and associated task forces focused primarily on the wireline segment of the industry.<sup>46</sup> The Working Group did not fully consider issues related to CMRS providers because the wireless industry was still addressing number portability technical solutions, and the Working Group wanted to ensure timely completion of wireline local number portability implementation.<sup>47</sup> As a result, the NANC did not make recommendations regarding the implementation of number portability by CMRS providers. As discussed below, however, we direct the NANC to develop and make recommendations that will allow CMRS providers to participate fully in local number

---

<sup>41</sup> *Working Group Report* at Appendix B (Working Group and task force meeting schedules). *The North American Numbering Council Chairman Announces Organizational Structure and Seeks Working Group and Task Force Participants*, Public Notice, CC Docket No. 92-237 (rel. Oct. 4, 1996), 11 FCC Rcd 12761 (CCB 1996) (NANC Announces Organizational Structure Public Notice); *Local Number Portability Administration Selection Working Group Status Report: North American Numbering Council Meeting of February 26, 1997* at 1, CC Docket No. 95-116, filed Mar. 4, 1997 (*Local Number Portability Administration Working Group February 26, 1997 Status Report*); *see also* *Local Number Portability Administration Selection Working Group Status Report: North American Numbering Council Meeting of December 2, 1996*, CC Docket No. 95-116, filed Dec. 4, 1996 (*Local Number Portability Administration Working Group December 2, 1996 Status Report*) at 7.

<sup>42</sup> *Working Group Report* at § 2.4.

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.* at § 3.

<sup>47</sup> *Id.*

portability.<sup>48</sup>

15. The *Working Group Report*, which the NANC submitted to the Commission as its recommendations on number portability administration,<sup>49</sup> incorporated reports developed by the Architecture Task Force and the Technical & Operational Task Force and made recommendations to the Commission in the following areas: (1) what party or parties should be selected as local number portability administrator(s); (2) whether one or multiple local number portability administrator(s) should be selected; (3) how the local number portability administrator(s) should be selected; (4) specific duties of the local number portability administrator(s); (5) geographic coverage of the regional databases; (6) technical standards, including interoperability standards, network interface standards, and technical specifications, for the regional databases; and (7) the future role of the NANC with respect to local number portability issues.<sup>50</sup> We address below each NANC recommendation.

### III. ISSUES

#### A. Local Number Portability Databases

##### 1. Geographic Coverage of Number Portability Databases

###### a. Background

16. In the *First Report & Order*, the Commission concluded that a system of regional number portability databases would best serve the public interest and directed the NANC to determine the geographic coverage of the regional number portability databases.<sup>51</sup> The NANC recommends that a Number Portability Administration Center database be established for each of the seven original BOC regions<sup>52</sup> so as to cover the 50 states, the District of Columbia and the U.S. territories in the North American Numbering Plan area

---

<sup>48</sup> See ¶¶ 87 - 92, *infra*.

<sup>49</sup> See Letter from Alan C. Hasselwander, Chairman, NANC, to Reed Hundt, Chairman, FCC, CC Docket No. 95-116 (May 1, 1997), transmitting the *Working Group Report*.

<sup>50</sup> See generally *Working Group Report*.

<sup>51</sup> *First Report & Order*, 11 FCC Rcd at 8401, 8402, ¶¶ 93, 95.

<sup>52</sup> The term "original BOC region" refers to the service areas of the seven BOCs as they existed as of February 8, 1996, the date the 1996 Act was signed into law.

(e.g., U.S. Virgin Islands and Puerto Rico).<sup>53</sup> Because the U.S. territories are not located within any of the original BOC regions, the NANC further recommends that each U.S. territory choose which of the seven regional databases will be used by carriers operating within that territory to provide number portability.<sup>54</sup> The specific geographic coverage of the databases recommended by the NANC is as follows:

<b>RECOMMENDED NPAC REGIONS</b>	<b>SPECIFIC STATES per NPAC REGION</b>
<b>Region # 1: WESTERN</b>	Washington, Oregon, Montana, Wyoming, North Dakota, South Dakota, Minnesota, Iowa, Nebraska, Colorado, Utah, Arizona, New Mexico, Idaho, and Alaska
<b>Region # 2: WEST COAST</b>	California, Nevada, and Hawaii
<b>Region # 3: MID-WEST</b>	Illinois, Wisconsin, Indiana, Michigan, and Ohio
<b>Region # 4: SOUTHEAST</b>	Florida, Georgia, North Carolina, South Carolina, Tennessee, Kentucky, Alabama, Mississippi, and Louisiana
<b>Region # 5: MID-ATLANTIC</b>	New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, Virginia, and Washington, D.C.
<b>Region # 6: SOUTHWEST</b>	Texas, Oklahoma, Kansas, Arkansas, and Missouri
<b>Region # 7: NORTHEAST</b>	Vermont, New Hampshire, Maine, New York, Connecticut, Rhode Island, and Massachusetts

17. The NANC acknowledges that the Commission directed the NANC to develop recommendations regarding the deployment of number portability databases on a regional

<sup>53</sup> *Working Group Report* at § 6.6.5; *Architecture Task Force Report* at § 9. The North American Numbering Plan is the basic numbering scheme that permits interoperable telecommunications service within the United States, Canada, Bermuda and most of the Caribbean. *Numbering Plan Order*, 11 FCC Rcd at 2590-91, ¶ 3.

<sup>54</sup> *Architecture Task Force Report* at § 9. The NANC reports that Canada intends to create its own Number Portability Administration Center to serve all of Canada. *Id.*

basis,<sup>55</sup> and gives several reasons for recommending that number portability databases be established, as a general matter, for regions covering several states. First, the NANC notes that, prior to its formation, significant work had taken place in state and regional fora to select administrators to serve regions rather than single states.<sup>56</sup> Further, the NANC reports that some of the lead states in number portability deployment were seeking other states with which to establish a joint Number Portability Administration Center, and some state commissions (*e.g.*, Maryland and California) had formally asked neighboring states to join the efforts of their state LLC.<sup>57</sup> Second, the NANC submits that a regional database approach is superior to either deploying a database for each state or establishing one database for the entire nation.<sup>58</sup> In particular, the NANC concludes that deploying separate Number Portability Administration Center systems for each state would be uneconomic and inefficient.<sup>59</sup> Further, the NANC concludes that a nationwide Number Portability Administration Center system would be technically and administratively unwieldy because the amount of information needed to route calls using such a database would become overwhelming as number portability is deployed nationwide.<sup>60</sup>

18. The NANC also gives several justifications for recommending that the original BOC regions, in particular, provide appropriate service area boundaries for the Number Portability Administration Centers. First, the NANC observes that by establishing regions that match BOC territories, each BOC will (at least initially) have to connect to only a single regional database, which the NANC believes will simplify and accelerate implementation and may lead to lower costs.<sup>61</sup> Second, the NANC points out that incumbents and new entrants in each of the original BOC regions are currently working together on projects that pertain to those regions, both in the context of associations organized by state commissions to address regional issues and in state commission-sponsored workshops.<sup>62</sup> For example, carriers,

---

<sup>55</sup> *Working Group Report* at § 2.1.1.

<sup>56</sup> *Id.* at § 6.6.3.

<sup>57</sup> *Id.* LLCs are discussed at ¶¶ 93-98, *infra*.

<sup>58</sup> *Working Group Report* at § 6.6.5.2.

<sup>59</sup> *Id.* at § 6.6.5.1.

<sup>60</sup> *Id.* at § 6.6.5.2.

<sup>61</sup> *Id.*

<sup>62</sup> *Id.* at § 6.6.5.3.

through the LLCs, already have chosen database administrators for each BOC region.<sup>63</sup> Third, the NANC observes that the designation of BOC territories as the appropriate Number Portability Administration Center coverage areas has been agreed to by all industry segments in national, regional and state number portability fora.<sup>64</sup> Fourth, the NANC states that the number of access lines in the proposed regions are roughly comparable, thereby ensuring that the size and complexity of the database for each region will be roughly the same.<sup>65</sup>

**b. Positions of the Parties**

19. Cincinnati Bell Telephone (CBT), the only party that commented on the NANC's recommendation regarding the geographic coverage of the regional number portability databases, criticizes the NANC's proposal to establish number portability databases for each BOC region. CBT argues that the NANC's proposal would force it to utilize two separate databases (Midwest and Southeast) to provide number portability in its territory, which covers portions of two adjacent BOC regions (Ameritech and BellSouth).<sup>66</sup> CBT submits that it will cost CBT an extra \$400,000 to connect to databases in two different regions.<sup>67</sup> While CBT indicates that it does not disagree with the NANC's justifications for basing the regional databases on the BOC territories, it argues that the NANC neglected to consider the impact of this scheme on non-BOCs.<sup>68</sup> CBT claims that, for small and mid-sized carriers, number portability requirements are already burdensome, and this burden will be compounded if some of these carriers are required to utilize two different databases.<sup>69</sup> Moreover, CBT asserts that organizing the databases by BOC region gives an unfair cost advantage to BOCs that compete with independent LECs whose territories are divided among BOC regions.<sup>70</sup>

---

<sup>63</sup> *Architecture Task Force Report* at § 9.

<sup>64</sup> *Working Group Report* at § 6.6.5.4.

<sup>65</sup> *Architecture Task Force Report* at § 9.

<sup>66</sup> CBT Comments at 2-3.

<sup>67</sup> *Id.* at 3.

<sup>68</sup> *Id.* at 2.

<sup>69</sup> *Id.* at 3-4.

<sup>70</sup> *Id.* at 4.

20. To avoid the additional financial burden that CBT claims it will incur if its numbers are assigned to two different databases, CBT contends that non-BOCs with contiguous operating areas should be allowed to select either of the regional databases that cover its service area to provide number portability.<sup>71</sup> CBT argues that allowing it to select one regional database to provide number portability would be consistent with the Commission's decision to treat much of CBT's territory as one market for purposes of the Commission's implementation schedule in the top 100 MSAs.<sup>72</sup> CBT adds that its solution will not significantly shift the distribution of lines among BOC regions and, by reducing CBT's cost of providing number portability, should reduce the overall cost of implementing number portability.<sup>73</sup> WorldCom states that it agrees with the rationale for CBT's request, stating that it would be difficult to use two different databases to provide number portability in the Cincinnati MSA.<sup>74</sup>

**c. Discussion**

21. Databases By BOC Region. We adopt the NANC's recommendation that a Number Portability Administration Center database be established for each of the original BOC regions so as to cover, collectively, the 50 states, the District of Columbia and the U.S. territories in the North American Numbering Plan Area.<sup>75</sup> The NANC's reasons for recommending that number portability databases be established on a regional basis underscore the Commission's conclusion, in the *First Report & Order*, that implementing a system of regional databases, in general, would best serve the public interest.<sup>76</sup> We also agree with the NANC that establishing a regional database for each of the original BOC regions, in particular, would provide numerous benefits. Specifically, deploying number portability databases by BOC region will: (1) build on the efforts of the LLCs, which

---

<sup>71</sup> *Id.* at 4. While CBT suggests that it may be the only incumbent LEC with a contiguous operating area whose territory is not wholly contained within one of the seven BOC regions, it requests modification of the NANC recommendations on behalf of itself and any similarly situated LECs. *Id.* at 2.

<sup>72</sup> According to CBT, the Cincinnati MSA includes all of CBT's Kentucky territory and almost all of its Ohio territory. *Id.* at 4.

<sup>73</sup> *Id.* at 5. CBT submits that it has less than 0.6% of all access lines, while over 75% of access lines are BOC lines. *Id.*

<sup>74</sup> WorldCom Reply Comments at 9.

<sup>75</sup> See *Working Group Report* at § 6.6.5; *Architecture Task Force Report* at § 9.

<sup>76</sup> *First Report & Order*, 11 FCC Rcd at 8399-8400, ¶ 91.

already have chosen local number portability database administrators in each of the original BOC regions; (2) make use of the technical and organizational experience of the state-sponsored associations and workshops; and (3) minimize the cost and complexity of use of the databases by the BOCs.<sup>77</sup> Moreover, we find it significant that, according to the NANC, industry fora at all levels have agreed to the designation of BOC territories as the appropriate Number Portability Administration Center coverage areas. Indeed, there is no evidence in the record that deploying the databases by BOC region would cause significant hardship for the vast majority of carriers, and the one carrier that claims it will face such hardship, CBT, asks only that it be allowed to select one of the databases for two adjacent BOC regions to provide number portability. Accordingly, we conclude that establishing a database for each of the original BOC regions would serve the public interest.

22. We decline, at this time, to grant CBT's request that it be allowed to select one regional Number Portability Administration Center for purposes of fulfilling its number portability responsibilities. We find that the current record is insufficient to make a finding that granting CBT's request will not raise technical difficulties with respect to local number portability implementation or have negative financial consequences for carriers responsible for conducting the queries necessary to route calls to the proper terminating carrier. Because the record on this issue is insufficient for us to make a determination whether the benefits to CBT of granting its request outweigh the potential harm to other carriers, we decline to make such a determination at this time. Instead, we direct the NANC to review CBT's request and to make a recommendation to the Commission, on or before December 15, 1997. Specifically, we direct the NANC to address the question of whether LECs with contiguous operating areas that overlap more than one number portability database region should be allowed to select a single Number Portability Administration Center.

23. U.S. Territories. We adopt the NANC's recommendation that each U.S. territory in the North American Numbering Plan be permitted to choose one of the seven regional databases for purposes of implementing number portability.<sup>78</sup> Because of their various locations, the U.S. territories are not included within any BOC's territory, nor do they collectively comprise another, separate region. The NANC's recommendation that each territory choose a particular regional database provides a reasonable alternative to creating additional Number Portability Administration Center regions that are much smaller than the

---

<sup>77</sup> *Architecture Task Force Report* at § 9.

<sup>78</sup> U.S. territories include Puerto Rico, the U.S. Virgin Islands, Guam and the Commonwealth of the Northern Mariana Islands. *Administration of the North American Numbering Plan Carrier Identification Codes (CICs)*, Petition for Rulemaking of VarTec Telecom., Inc., CC Docket No. 92-237, FCC 97-125 (rel. April 11, 1997), ¶ 2 n.6. See 62 Fed. Reg. 19056 (1997).

Number Portability Administration Center regions that are based on BOC regions.

24. We further find that allowing the U.S. territories to select the regional database they will use to provide number portability will not significantly change the size or complexity of any one database or otherwise undermine the public interest benefits of the regional database system. Accordingly, we hereby direct each U.S. territory to: (1) select a regional database that carriers in that territory will use to provide number portability; and (2) notify the Commission and the NANC in writing regarding this selection within 45 days of the release of this order. Each territory's selection of a particular database is final.

## 2. Selection of Database Administrators

### a. Background

25. In the *First Report & Order*, the Commission delegated to the NANC the task of selecting one or more local number portability database administrators.<sup>79</sup> The Commission stated, in pertinent part:

We hereby direct the NANC to select as a local number portability administrator(s) (LNPA(s)) one or more independent, non-governmental entities that are not aligned with any particular telecommunications industry segment.<sup>80</sup>

In response to this directive, the NANC recommends that Lockheed Martin and Perot Systems serve as local number portability database administrators.<sup>81</sup> Specifically, the NANC recommends that Lockheed Martin serve as the database administrator for the Northeast, Mid-Atlantic, Midwest and Southwest regions and that Perot Systems serve as the database administrator for the Southeast, Western and West Coast regions.<sup>82</sup>

---

<sup>79</sup> *First Report & Order*, 11 FCC Rcd at 8401, ¶ 93.

<sup>80</sup> *Id.*

<sup>81</sup> *Working Group Report* at § 6.2.4.

<sup>82</sup> *Id.* The NANC's recommendations with respect to the specific regions are discussed at ¶ 16, *supra*.

26. These recommendations are based in large part on the efforts of "service providers"<sup>83</sup> that were already taking steps to identify and screen potential local number portability database administrators.<sup>84</sup> Efforts were well underway in at least one state in each of the original BOC regions to select a neutral third-party local number portability administrator prior to the first Working Group meeting. Carriers in Illinois, Georgia, California, Maryland, Colorado, New York, and Texas had already issued requests for proposals (RFPs) and formed LLCs for each state to construct and maintain a number portability database,<sup>85</sup> and each LLC had contacted neighboring states in order to expand these state databases into regional databases covering the entire BOC service area.<sup>86</sup> The RFPs issued in each region set forth substantially similar requirements for the Number Portability Administration Center Service Management System and the mechanized interface.<sup>87</sup>

27. Service providers in each of the original seven BOC regions began the process of selecting a local number portability database administrator by consulting with a broad range of entities (including state regulatory commissions, providers of database services and carriers of all types interested in local number portability) to develop RFPs. After the RFPs had been finalized, service providers also worked together and with state regulators to: (1) disseminate the RFPs; (2) screen proposals from potential database administrators in order to identify the best candidate(s) in each region; and (3) form LLCs, on a regional basis, for the purpose of negotiating with the database administrators ultimately selected a "master contract," which would set the terms and conditions for individual "user agreements" that would be executed by the database administrator and each carrier that would use the regional database.

---

<sup>83</sup> As defined by the NANC's Local Number Portability Architecture Task Force, the term "service provider" refers to carriers that are properly certificated to own or lease switching equipment to provide local telecommunications services. *Architecture Task Force Report* at § 7.1.

<sup>84</sup> *Working Group Report* at § 4.2.6. The NANC's recommendations suggest that service providers, rather than the LLCs, handled most aspects of the selection of local number portability administrators until the contracting stage, at which point the LLCs became active. *See id.* at § 4.2.4 ("Those Service Providers *that organized themselves into [an LLC]* then began negotiations with one or more best qualified Vendors of a master contract that would govern the obligations and rights of the parties and establish the conditions for the provision of [number portability] data to all utilizing carriers.") (emphasis added).

<sup>85</sup> North American Numbering Council, State NPAC/SMS Status at 1-5, CC Docket No. 95-116, filed Jan. 8, 1997 (NANC January 8, 1997 State NPAC/SMS Status).

<sup>86</sup> NANC January 8, 1997 State NPAC/SMS Status at 1-5.

<sup>87</sup> *Working Group Report* at § 2.5.1.

28. In light of the considerable, and apparently consistent, state/regional local number portability activities, the Working Group undertook an in-depth review and assessment of the state/regional efforts, rather than developing a separate and competing plan for the selection of database administrators.<sup>88</sup> Specifically, in order to accomplish the necessary review of state/regional efforts, the Working Group developed the following work plan under which it:

- (a) established a central repository of documents pertaining to the ongoing state and regional number portability activities (*e.g.*, RFPs, Interoperability Interface Specifications, Generic Requirements Specifications, etc.);
- (b) examined technical and operational aspects of each of these documents to determine whether they differ and, if so, how;
- (c) determined whether identified differences among state and regional activities needed to be eliminated;
- (d) developed a single set of technical and architectural criteria that each regional system must meet in order to be endorsed by the NANC;
- (e) determined specific duties of the local number portability administrator(s); and
- (f) ensured that all geographic areas are covered.<sup>89</sup>

Thus, in developing uniform criteria for the selection of local number portability administrators and the development of technical specifications for the Number Portability Administration Center databases, the Working Group drew largely from existing efforts, but supplemented and revised those efforts as it deemed necessary.<sup>90</sup> The Working Group recommended to the NANC those state/regional local number portability administrator selections that met the criteria specified above; the NANC, in turn, endorsed these

---

<sup>88</sup> *Id.* at § 2.5.2.

<sup>89</sup> *Id.* at § 2.5.3. During the time period when the Working Group was developing its local number portability administration selection criteria, the state/regional workshops continued to move forward with their efforts. As a result, an iterative process developed between the national and regional efforts, with the Working Group and its task forces becoming the forum for resolution of disputed state/regional issues. For example, a disagreement among carriers in state workshops concerning the local number portability provisioning flows was brought to the NANC's Technical & Operational Task Force for resolution. After an extensive effort, the Technical & Operational Task Force eventually adopted a compromise acceptable to all members. *Id.* at § 2.5.4.

<sup>90</sup> *Id.* at 2.5.4.

recommendations and submitted them to the Commission for approval.<sup>91</sup>

29. In addition to recommending various technical specifications that local number portability administrators must satisfy, the *Working Group Report* lists certain criteria based on the 1996 Act and the *First Report & Order*, which the NANC concluded should govern the selection of a local number portability database administrator.<sup>92</sup> These criteria include: (1) "competitive neutrality," meaning that local number portability database administrators must be unaligned with any industry segment and that local number portability database administrators must treat competing users of their services impartially with respect to costs, terms and conditions; (2) equal and open access to local number portability databases and numbers; (3) uniformity in the provision of local number portability data; (4) cost effective implementation of local number portability; (5) consistency in local number portability administration; (6) local number portability database administrator compliance with NANC-determined technical and functional proficiency standards; and (7) regionalized local number portability database administrator deployment within the Commission's deployment schedule.<sup>93</sup> The NANC states that its Working Group reviewed each state/regional selection process and determined that "each and every action undertaken [by the service providers] as part of the [local number portability database administrator] selection process conforms to, and thus satisfies" the criteria identified by the NANC.<sup>94</sup>

30. According to the NANC, the potential database administrators responding to the RFPs were subjected to a thorough pre-qualification process, during which the service providers considered several factors, including the neutrality of the database administrator with respect to providers of local exchange services, financial responsibility, experience and ability to deliver the services contemplated by the RFP in a timely manner.<sup>95</sup> The service providers then evaluated those entities satisfying the pre-qualification requirements to determine which potential database administrators could best provide timely, cost-effective and technically proficient services.<sup>96</sup> The NANC's recommendations regarding the selection

---

<sup>91</sup> *Id.* at § 2.5.

<sup>92</sup> *Id.* at § 4.1.1 (citing *First Report & Order*, 11 FCC Rcd at 8399-01, 8402, 8403-04, ¶¶ 91-93, 95, 98-99).

<sup>93</sup> *Id.* at § 4.1.1.

<sup>94</sup> *Id.* at § 4.2.1.

<sup>95</sup> *Id.* at § 4.2.3.

<sup>96</sup> *Id.*

of the specific local number portability administrators for each region are subject to completion of negotiations regarding the master contracts between each regional LLC and the local number portability database administrator associated with that region.<sup>97</sup> According to the NANC, negotiations between the database administrators and service providers regarding the terms and conditions of the master contracts are either completed or are near completion.<sup>98</sup>

31. In addition, the NANC recommends that if a local number portability database administrator operates in two or more regions, the LLCs in those regions should be permitted to elect to request that the administrator use the same "platform" (*i.e.*, the same computer system)<sup>99</sup> to serve one or more regions, as long as the administrator satisfies all service requirements specified in the master contract between the database administrator and LLC and in user agreements between the database administrator and each carrier using the regional database.<sup>100</sup> Further, the NANC recommends that local number portability database administrators, on their own initiative, be allowed to create "virtual Number Portability Administration Centers," *i.e.*, that local number portability database administrators be allowed to serve one or more regions on the same computer system, provided the administrator satisfies all service requirements specified in the master contract and user agreements.<sup>101</sup>

---

<sup>97</sup> *Id.* at § 6.2.4.

<sup>98</sup> *Id.* at § 4.2.5. As of April 25, 1997, the date the *Working Group Report* was issued, master contracts between the regional LLC and the database administrator were completed in the Midwest (Lockheed Martin) and West Coast (Perot Systems) regions only. *Id.* at § 6.2.4. As of July 31, 1997, master contracts also had been completed in the Southeast (Perot Systems) and Western (Perot Systems) regions. See Letter from Leonard S. Sawicki, Director, FCC Affairs, MCI, to William A. Caton, Acting Secretary, FCC, CC Docket No. 95-116 (filed July 31, 1997) (MCI July 31, 1997 *Ex Parte* Letter).

<sup>99</sup> By recommending that a local number portability database administrator may, at the LLC's request, serve multiple regions using the same "platform," the Commission understands the NANC to be recommending that local number portability database administrators may store and manipulate the information for each region using one integrated computer system, rather than separate systems.

<sup>100</sup> *Working Group Report* at § 6.6.4. For an explanation of the terms "master contract" and "user agreement," see ¶ 27, *supra*.

<sup>101</sup> *Architecture Task Force Report* at § 11.

**b. Positions of the Parties**

32. None of the commenting parties opposes the adoption of the NANC's recommendation that Lockheed Martin and Perot Systems serve as regional local number portability database administrators.

**c. Discussion**

33. We adopt the NANC's recommendation that Lockheed Martin serve as local number portability database administrator for the Northeast, Mid-Atlantic, Midwest and Southwest regions, and that Perot Systems serve as the local number portability database administrator for the Southeast, Western and West Coast regions. As noted above, the *First Report & Order* directed the NANC to select one or more local number portability database administrators that are independent, non-governmental entities that are not aligned with any particular telecommunications industry segment.<sup>102</sup> We find that the criteria utilized by the NANC in reviewing and evaluating the selection process employed by the various service providers at the regional level were sufficient to ensure that the local number portability database administrators ultimately recommended meet the Commission's requirements. We further note that no party to the proceeding objects to the selections. We, however, may review and, if necessary, modify our approval of the recommended local number portability administrators in the event that negotiations between Lockheed Martin or Perot Systems and the LLCs do not result in completed master contracts for each region.

34. We also adopt the NANC's recommendations that (1) LLCs be allowed to elect to have the local number portability database administrator for separate regions serve those regions using the same platform; and (2) database administrators be allowed to create "virtual Number Portability Administration Centers."<sup>103</sup> In the *First Report & Order*, the Commission found that regional databases will facilitate the provision of number portability by reducing the distance and resulting cost associated with carriers transmitting carrier routing information and by relieving individual carriers of the burden of deploying multiple databases over various geographic areas.<sup>104</sup> The Commission also concluded that the amount of information that would have to be processed if there were only one national database

---

<sup>102</sup> *First Report & Order*, 11 FCC Rcd : 8401, ¶ 93.

<sup>103</sup> *Working Group Report* at § 6.6.4; *Architecture Task Force Report* at § 11.

<sup>104</sup> *First Report & Order*, 11 FCC Rcd at 8399-00, ¶ 91.

would become overwhelming as number portability is deployed nationwide.<sup>105</sup> We reiterate our conclusion that, absent technical advances or other changed circumstances, it would not be in the public interest for number portability to be provided in this manner.<sup>106</sup> We clarify, however, that our prohibition on the establishment of one national database does not preclude local number portability database administrators from using the same computer hardware or software to store, utilize or provide access to multiple databases by, for example, separating regional databases stored on the same computer or system of computers by means of database partitions.<sup>107</sup>

35. As a practical matter, there is nothing in the record to suggest that allowing multiple regions to be served from the same computer platform would lead to a national database.<sup>108</sup> Moreover, there is nothing in the record to suggest that the LLCs or local number portability database administrators would implement such shared use of a database platform in ways that would inhibit the efficient operation of any aspect of the database system for number portability. Consequently, we will, as the NANC recommends, allow either LLCs or local number portability database administrators to elect to have multiple regions served using the same database platform, provided it is technically feasible for the local number portability database administrator to serve the regions using the same database platform and adequate steps have been taken by the administrator to safeguard network

---

<sup>105</sup> *Id.*

<sup>106</sup> See Letter from Cheryl A. Tritt, Counsel, Lockheed Martin IMS, to Kyle Dixon, FCC, CC Docket No. 95-116 (filed July 31, 1997) (Lockheed Martin July 31, 1997 *Ex Parte* Letter) at 2 (arguing that a regional database architecture is preferable, from a technical and economic standpoint, to an architecture based on a single national database).

<sup>107</sup> Lockheed Martin reports that, at the request of the LLCs for its four regions, it will provide number portability database services for those regions from a centralized location. See Lockheed Martin July 31, 1997 *Ex Parte* Letter at 1. In particular, Lockheed Martin will provide service for the four regions using a distributed system of computers. Within this distributed system, each of the four separate regional databases will be stored on a shared set of computer file servers. Each regional database, however, is maintained within separate database partitions, such that database storage and operations for each of the four regions are logically separated from each other, even though they are served by a common system of computers. Lockheed Martin submits that this system "is in direct contrast to the concept of a single national database which operates on a single mainframe computer, [in which] all regions would be served out of a single database partition such as that currently used for toll-free number administration services." *Id.* at 1-2.

<sup>108</sup> Indeed, in light of this order, the number portability regions will be divided between two, independent local number portability database administrators. See ¶ 33, *supra*. See also n.107, *supra*.

reliability.<sup>109</sup> We underscore, however, that the Chief of the Common Carrier Bureau retains delegated authority to take appropriate action regarding any existing or potential problems associated with serving one or more regions using the same database platform.<sup>110</sup>

### 3. Number of Database Administrators

#### a. Background

36. The Commission directed the NANC to "determine, in the first instance, whether one or multiple administrators should be selected . . . ."<sup>111</sup> Rather than making an independent assessment of the number of local number portability database administrators that should be selected, the NANC determined the appropriate number of local number portability database administrators by deciding, first, who should serve as the local number portability database administrator in each of the seven BOC regions.<sup>112</sup> The *Working Group Report* states that it is unnecessary to make a specific recommendation at this time regarding whether one or multiple database administrators

should be selected, since two different [administrators] were independently selected by the regional LLCs to administer [Number Portability Administration Center] systems and services. Had only a single [administrator] been selected to administer all of the regional [Number Portability Administration Center] systems, the [NANC] had planned to undertake a review of the consequences, and make further recommendations if appropriate.<sup>113</sup>

---

<sup>109</sup> For example, Lockheed Martin states that it plans to use a back-up system located separately from the main system that would store, utilize and provide access to databases for all of the regions for which it has been selected as the database administrator in the event the main system becomes unavailable. See Lockheed Martin July 31, 1997 *Ex Parte* Letter at 1.

<sup>110</sup> See *First Report & Order*, 11 FCC Rcd at 8403, ¶ 97 ("We delegate authority to the Chief, Common Carrier Bureau, to monitor the progress of the NANC in selecting the LNPA(s) and in developing and implementing the database architecture . . . ."); *id.* at 8393, ¶ 78 ("We delegate authority to the Chief, Common Carrier Bureau, to monitor the progress of local exchange carriers implementing number portability, and to direct such carriers to take any actions necessary to ensure compliance with this deployment schedule.").

<sup>111</sup> *Id.* at 8402, ¶ 95.

<sup>112</sup> See ¶ 19, *supra*.

<sup>113</sup> *Working Group Report* at § 6.3.4.