

Before the
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:

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## 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 amended (the Act), which requires all local exchange carriers (LECs) to offer, "to the extent technically feasible, local 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>

2. The NANC forwarded its recommendations to the Commission on May 1, 1997, in a report from the 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 recommendations.

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<sup>1</sup> *Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8352 (*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, 104 Stat. 107, 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, § 214. 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 efficient and pro-competitive, while continuing to maintain and foster an integrated approach to number administration throughout North America. The NANC's Charter, *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, Bell Telephone, Competitive Telecommunications Association (Comptel), Cellular Telephone Industry Association (CTIA), Eastman Kodak Corp., Frontier, GTE, MCI, Mobility Canada, National Association of Regulatory Utility Commissioners (NARUC), National Communications Association (NCTA), Nextel, Northern Telecom, NYNEX, Omnipoint, Organization for the Protection and Advancement of Small Business Enterprises (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.

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

the NANC's local number portability recommendations.<sup>6</sup> Eight parties filed comments, and seven parties filed comments.<sup>7</sup> Although several incumbent LECs take exception to the NANC's proposals related to the oversight 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 (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.

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 administrators of 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.

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<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 set forth in 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; 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.

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 large part to open local exchange markets to competition by removing existing statutory, regulatory, and open 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 incumbent and new entrants, to provide number portability in accordance with requirements prescribed by the Commission. 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 local-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 new facilities-based entrants are unable to win customers from incumbent providers as a result of technical 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) 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,

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<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.

<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 areas. 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 97-168 (rel. March 11, 1997) (*First Order on Reconsideration*), further recon. pending. The *First Order on Reconsideration*

extending the completion dates for the first two phases of the implementation schedule and clarifying that, with 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>

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 capability 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 customers and 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

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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 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 ¶ 1.

<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.*

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 in choosing a particular technology or specific 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 NAB, the industry and the state/regional workshops have chosen the Location Routing Number solution (LRN) as a preferred method of providing long-term number portability.<sup>27</sup> Under the LRN method, a unique 10-digit number "location routing number" is assigned to each central office switch to identify each switch in the network for routing purposes. The location routing number then serves as a network address. A database is used to store 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 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 ported number.

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<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 applications; (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 to route calls to the proper termination point; (5) not result in unreasonable degradation in service quality or network reliability when customers switch carriers; (6) not result in any degradation of service quality or network reliability when customers switch carriers; (7) not result in a carrier's proprietary interest; (8) be able to accommodate location and service portability in the future; and (9) have no significant adverse effects on 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 the 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.

<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 switch to process and complete a telephone call; and (2) provides telecommunications carriers with the capability of entering an

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. 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 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

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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. Network switches access an SCP to obtain such information. Typically, the information contained in an SCP is obtained from the

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 that contain the lists of ported telephone numbers. The local number portability administrators, which contain the lists of ported telephone numbers, periodically transmit the lists of ported numbers 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 contains a 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 moved to the new service provider's network. The Number Portability Administration Center Service Management System will contain a record of 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 facilitate the synchronization of the service providers' network elements that support portability. *Technical and Operational Task Force Report*, § 8.2.

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

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 local regional databases, the overall national architecture, and technical specifications for the regional databases.<sup>34</sup> 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 cost 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, 1995. 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>

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

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<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, Atlantic, Bellcore, BellSouth, BellSouth Wireless, California Public Utilities Commission, Cox, Florida Public Service Commission, 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, Selectronics, Sprint, Sprint PCS, Personal Communications Industry Association (PCIA), Stentor, Telefonica de Puerto Rico, Telex Corporation, Warner, National Cable Television Association (NCTA), US West, United States Telephone Association, and WorldCom. *Working Group Report* at Appendix A-1.

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> Working Group and its task forces met regularly to assist the NANC in making its recommendations 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 disagreed.<sup>42</sup> An entity could exercise only one vote on any given issue before the Working Group and task force. Members elected co-chairs from the incumbent LEC and competitive LEC segments of the industry to administer

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<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 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 Wireless, California Public Utilities Commission, Cox, GTE, Illinois Commerce Commission, Interstate Fibernet, Lucent Technologies, Nortel, NYNEX, Ohio Public Utilities Commission, OPASTCO, Pacific Bell, Perot Systems, Sprint, SBC, Time Warner, NCTA 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, 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.

<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 Selection Working Group 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 Selection Working Group December 2, 1996 Status Report) at 7.

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

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

Working Group activities and determine consensus when required.<sup>44</sup> The Working Group escalated issues to 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 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 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

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

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

<sup>46</sup> *Id.* at § 3.

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

<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 (M) (transmitting the *Working Group Report*).

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

**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 states, the District of Columbia and the U.S. territories in the North American Numbering Plan area (e.g., U.S. 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

<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 1996 Act was signed into law.

<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 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.*

17. The NANC acknowledges that the Commission directed the NANC to develop recommendations regarding the deployment of number portability databases on a regional 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 select administrators to serve regions rather than single states.<sup>56</sup> Further, the NANC reports that some of the 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 is wasteful, 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 be stored in 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 industry associations organized by state commissions to address regional issues and in state commission-sponsored workshops.<sup>62</sup> For example, carriers, through the LLCs, already have chosen database administrators for each region.<sup>63</sup> Third, the NANC observes that the designation of BOC territories as the appropriate Number Portability

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<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.

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

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 recommendations 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 require the use of 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 estimated \$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>

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 utilize either of the regional databases that cover its service area to provide number portability.<sup>71</sup> CBT argues that a requirement to select one regional database to provide number portability would be consistent with the Commission's decision in

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<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.

<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 contained within one of the seven BOC regions, it requests modification of the NANC recommendations on behalf of itself and other similarly situated LECs. *Id.* at 2.

treat much of CBT's territory as one market for purposes of the Commission's implementation schedule in the MSAs.<sup>72</sup> CBT adds that its solution will not significantly shift the distribution of lines among BOC regions; 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 states, the District of Columbia and the U.S. territories in the North American Numbering Plan Area.<sup>75</sup> The 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 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 database for each region would cause significant hardship for the vast majority of carriers, and the one carrier that claims it will experience 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.

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

<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.

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

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 Commission 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 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 Number Portability Administration Center regions 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 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

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<sup>78</sup> U.S. territories include Puerto Rico, the U.S. Virgin Islands, Guam and the Commonwealth of the Northern Mariana Islands. See *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).

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

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 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>

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, Colorado, New York, and Texas had already issued requests for proposals (RFPs) and formed LLCs for each 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

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<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*.

<sup>83</sup> As defined by the NANC's Local Number Portability Architecture Task Force, the term "service provider" refers to carriers 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, handle most aspects of the selection of local number portability administrators until the contracting stage, at which point the LLCs become *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 [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 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.

RFPs. After the RFPs had been finalized, service providers also worked together and with state regulators to 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 candidates. The administrators ultimately selected a "master contract," which would set the terms and conditions for individual agreements" that would be executed by the database administrator and each carrier that would use the regional database.

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 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, General 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 recommendations and submitted them to the Commission.

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<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 administrator selection criteria, the state/regional workshops continued to move forward with their efforts. As a result, an iterative process developed between 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 adopted a compromise acceptable to all members. *Id.* at § 2.5.4.

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

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 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 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 provider part of the [local number portability database administrator] selection process conforms to, and thus satisfies 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. NANC's recommendations regarding the selection 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 a 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

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<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.*

<sup>97</sup> *Id.* at § 6.2.4.

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 LLC and in user agreements between the database administrator and each carrier using the regional database. 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>

#### **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

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<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 region and the database administrator were completed in the Midwest (Lockheed Martin) and West Coast (Perot Systems) regions only. 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 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 be permitted to access 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.

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

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) local number portability 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 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 one national database 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

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<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.

<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 service to 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 currently used for toll-free number administration services." *Id.* at 1-2.

served from the same computer platform would lead to a national database.<sup>108</sup> Moreover, there is nothing in record to suggest that the LLCs or local number portability database administrators would implement such split of a database platform in ways that would inhibit the efficient operation of any aspect of the database system 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 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 database 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

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<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*.

<sup>109</sup> For example, Lockheed Martin states that it plans to use a back-up system located separately from the main system that 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 8404, ¶ 98 ("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*.

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>

The NANC identified two advantages that would result from the selection of two database administrators. First, the NANC notes that if one administrator could not or would not perform its obligations under its master contract, there would be another administrator with the experience and expertise required to provide these services quickly and with minimal disruption to the industry. Second, the NANC observes that the selection of multiple database administrators permits competition in both the initial and future competitive bidding and selection processes, which should enable carriers to obtain more favorable terms and conditions than if only one database administrator had been selected.<sup>114</sup> The NANC concludes that the selection of two database administrators is consistent with the Commission's directive that the NANC recommend the most cost-effective number portability methods.<sup>115</sup>

#### **b. Positions of the Parties**

37. None of the commenting parties addresses the number of local number portability database administrators that should be selected.

#### **c. Discussion**

38. By the time the NANC submitted its recommendations to the Commission, the seven regional carriers had independently selected two separate database administrators: Lockheed Martin and Perot Systems. For this reason, the NANC concluded it was unnecessary to address whether more than one administrator should be selected. We find that the NANC acted reasonably in assessing whether having two administrators would be appropriate. Thus, we decline to disturb this result. Further, we agree, for the reasons given by the NANC, that there are clear advantages to having at least two experienced number portability database administrators that can compete with and substitute for each other, thereby promoting cost-effectiveness and reliability in the provision of Number Portability Administration Center services. While we recognize the likely benefits of having at least two administrators, we do not, at this time, adopt a requirement that two or any other number of entities serve as local number portability database administrators.

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

<sup>114</sup> *Id.* at § 6.3.5.

<sup>115</sup> *Id.*

#### 4. General Duties of Database Administrators

##### a. Background

39. The Commission directed the NANC to determine the duties of the local number portability database administrators.<sup>116</sup> The NANC describes these duties generally in its architecture plan for number portability,<sup>117</sup> and states that "[t]he primary role of the [local number portability database administrator] will assist users in obtaining access to the [Number Portability Administration Center] SMS."<sup>118</sup> To perform this NANC recommends that the local number portability database administrators perform the following functions: system administration, user support, and system support.<sup>119</sup> The NANC recommends that the administrative functions of the local number portability database administrator include all management tasks required to run the Number Portability Administration Center, including the provision of reports to regulatory bodies as required.<sup>120</sup>

40. With respect to user support,<sup>121</sup> the NANC recommends that the local number portability database administrators: (1) work with users "to update data tables required to route calls for ported local telephone numbers or required for [number portability] administration;" (2) be responsible for Number Portability Administration Center SMS log on administration, user access, data security, user notifications, and management; (3) serve as the primary contact for users that encounter problems with Number Portability Administration Center system features; and (4) provide users with a central point of contact for reporting and resolving Number Portability Administration Center problems.<sup>122</sup> In addition, in the event that a new local number portability database administrator is selected, the NANC recommends that the outgoing local number portability database administrator be required to provide continuity of quality of service during the period of transition to a new Number Portability Administration Center, and the

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<sup>116</sup> *First Report & Order*, 11 FCC Rcd at 8402, ¶ 95.

<sup>117</sup> *Working Group Report* at § 6.5.2; *see also Architecture Task Force Report* at § 12. The NANC describes the duties of the local number portability database administrator more specifically in the Functional Requirements Specification (FRS) and Interoperable Interface Specification (IIS). The FRS and IIS describe, for example, the responsibilities of the administrator in the areas of data management, SMS interfaces, system security, reports, performance and reliability, and billing. *Working Group Report* at § 6.5.2. The NANC recommendations regarding the Functional Requirements Specification and Interoperable Interface Specification are in ¶¶ 59 - 64, *infra*.

<sup>118</sup> *Architecture Task Force Report* at § 12.5.2.

<sup>119</sup> *Id.*

<sup>120</sup> *Id.* at § 12.5.3.

<sup>121</sup> The term "user support" refers to those functions the local number portability database administrator would perform to assist users to perform database dips in order to provide number portability.

<sup>122</sup> *Architecture Task Force Report* at § 12.5.3.

transition to a new database administrator be transparent to users. The NANC further recommends that sufficient time be given for carriers to use both systems simultaneously during such transition in order to allow them to install test links to the new Number Portability Administration Center, remove any equipment or connections to the Number Portability Administration Center, install any necessary equipment at disaster recovery sites, and resolve problems arising from the transition.<sup>123</sup>

41. With respect to system support, the NANC recommends that the local number portability database administrators: (1) provide coordination/resolution of problems associated with system availability, communication, and related capabilities; (2) operate 24 hours a day, seven days a week; and (3) meet the service level requirements established by their respective LLCs.<sup>124</sup>

42. The NANC justifies the foregoing recommendations, in part, by noting that they represent the consensus recommendations of industry technical experts.<sup>125</sup> The NANC also finds support for its recommendations in the work of carriers and others at the regional level; the NANC notes that its architecture task force review process used in each state/region to develop detailed technical standards documents, the Functional Requirements Specification (FRS) and Interoperable Interface Specification (IIS), and determined that the Number Portability Administration Center roles and responsibilities defined in those documents were substantially similar across regions.<sup>126</sup> Moreover, the NANC refers to the duties in the FRS and IIS as "standard functions" that are "necessary to administer [the number portability] system and its databases, the interfaces between the system and those of various service providers, as well as the administrative functions performed by [local number portability database administrator] personnel."<sup>127</sup> In addition, the NANC notes that Lockheed Martin and Perot Systems are currently developing systems and processes in accordance with the general and specific duties the NANC describes in its architecture plan and in the FRS and IIS.<sup>128</sup>

#### **b. Positions of the Parties**

43. None of the commenting parties addresses the NANC's recommendations regarding the general duties of the local number portability database administrators.

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<sup>123</sup> *Id.* at § 12.5.4.

<sup>124</sup> *Id.* at § 12.5.3.

<sup>125</sup> *Working Group Report* at § 6.5.5.

<sup>126</sup> *Id.* at § 6.5.3. These technical standards documents are discussed more fully below. See ¶¶ 59 - 64, *infra*.

<sup>127</sup> *Working Group Report* at § 6.5.3.

<sup>128</sup> *Id.* at § 6.5.5.

### c. Discussion

44. We adopt the NANC's recommendations regarding the general duties of the local number portability database administrators. The NANC defined these duties based on input from the industry at the regional and state levels, and none of the commenting parties objects to them. These duties also appear to be consistent with the types of activities the Commission tentatively concluded would be necessary to deploy local number portability. For example, the Commission tentatively concluded that costs for long-term portability attributable to the "development and implementation of the hardware and software for the database," to the "maintenance, operation, security, administration, and physical property associated with the database," and to "uploading, downloading, and querying" associated with the database.<sup>129</sup> Moreover, the duties appear to be reasonably comprehensive, so as to enable the number portability administrators to implement the architectural technical specifications developed by the NANC, and neither the Commission nor the parties has identified any evidence that indicates a need to adopt general duties in addition to those recommended by the NANC. We note that the NANC based these general duties on the more specific duties described in the FRS and IIS and that the NANC's description of the underlying specific duties in the FRS and IIS as "standard functions" suggests that the specific and general duties the NANC recommends are noncontroversial.<sup>130</sup>

## B. Technical and Operational Standards

### 1. Background

45. In the *First Report & Order*, the Commission directed the NANC to make recommendations regarding "the technical interoperability and operational standards, the user interface between telecommunications carriers and the [local number portability administrators], and the network interface between the [regional databases and the downstream databases]," and to develop the technical specifications for the regional databases.<sup>131</sup> The Commission, through the Working Group and its Technical & Operational Task Force, recommends the following uniform standards and procedures for the implementation of local number portability:

- (a) industry standard provisioning process flows (Provisioning Process Flows) that detail precise procedures by which service providers and local number portability administrators

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<sup>129</sup> *First Report & Order*, 11 FCC Rcd at 8463, ¶ 216 (the discussion of cost recovery for long-term number portability is found in the *Further Notice of Proposed Rulemaking* adopted with the *First Report & Order*).

<sup>130</sup> For a more detailed discussion of the specific duties in the FRS and IIS, see ¶¶ 59 - 64, *infra*.

<sup>131</sup> *First Report & Order*, 11 FCC Rcd at 8402, ¶ 95. The "downstream databases" are the Service Control Points and the Service Management System databases that carriers will regularly access to determine if a telephone number has been ported. The "upstream databases" are the Number Portability Administration Center Service Management System databases, maintained by the local number portability administrators, which contain the lists of all ported telephone numbers and routing information. For an explanation of the local number portability databases and how they interact, see ¶ 8, *supra*.

- communicate between and among one another to accomplish the various tasks require implement local number portability;
- (b) an industry standard functional requirements specification (Functional Requirements Specification or FRS) that defines the functional requirements of the Number Portability Administration Center Service Management System;
  - (c) an industry standard interoperable interface specification (Interoperable Interface Specification or IIS) that defines the interfaces between the Number Portability Administration Center Service Management System and the service providers' local Service Management Systems;
  - (d) an industry-wide process for the porting of reserved and unassigned numbers and a process to enforce compliance; and
  - (e) an industry-wide procedure for designing, developing, testing, and implementing changes to the Functional Requirements Specification, the Interoperable Interface Specification related processes.<sup>132</sup>

The NANC determined that adoption of these uniform national standards and procedures would produce the following positive results: facilitate the industry's ability to meet number portability implementation deadline; maximize the use of local number portability resources for all companies; foster the design of associated products for other industry groups; promote development of timely and cost effective offers of local number portability products; minimize the expenditure of time and resources; and improve service quality nationwide, particularly for carriers serving multiple regions.<sup>133</sup>

46. In developing these standards and procedures, the Working Group delegated responsibility for defining technical standards, including interoperability operational standards, network interface standards and technical specifications, to the Technical & Operational Task Force.<sup>134</sup> The conclusions of that Task Force are documented in the *Technical & Operational Task Force Report* and incorporated into the *Working Group Report* at Appendix E.<sup>135</sup>

47. The Technical & Operational Task Force reviewed the activities in each of the seven Number

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<sup>132</sup> *Working Group Report* at § 6.7.3. These standards and procedures are detailed in the *Technical & Operational Task Force Report* and its appendices. The NANC has recommended adoption of these standards and procedures as set forth in these which have been incorporated by reference into the *Working Group Report*.

<sup>133</sup> *Id.* at § 6.7.5.2.

<sup>134</sup> *Technical and Operational Task Force Report* at § 1.2. The Technical & Operational Task Force convened 17 times between November 18, 1996 and April 18, 1997 to develop the technical and operational standards and procedures. *Working Group Report* at § 2.6.2.

<sup>135</sup> *Working Group Report* at § 6.7.2.

Portability Administration Center regions to evaluate the local number portability planning activities already underway and determined that industry representatives were developing local number portability technical and operational specifications concurrently in each region.<sup>136</sup> As noted above, prior to the formation of the Task Force, carriers in Illinois, Georgia, California, Maryland, Colorado, New York, and Texas had already formed LLCs and issued RFPs, inviting potential database administrators to submit proposals to provide a Number Portability Administration Center Service Management System.<sup>137</sup>

48. The Technical & Operational Task Force's review of state/regional local number portability planning activities revealed that the RFPs issued in each region contained substantially similar documents that define the Number Portability Administration Center Service Management System requirements and the mechanized interfaces and requirements.<sup>138</sup> The RFP in each region included, either as an attachment or by reference, a Functional Requirements Specification, which defines the functional requirements for the Number Portability Administration Center Service Management System, and an Interoperable Interface Specification, which contains the information model for the Number Portability Administration Center Service Management System mechanized interfaces.<sup>139</sup> The Technical & Operational Task Force also reviewed the Number Portability Administration Center Service Management System Provisioning Process Flows,<sup>140</sup> which each state/regional workshop was addressing independently.<sup>141</sup>

49. In reviewing the content of the regionally-developed Functional Requirements Specification, Interoperable Interface Specification, and Provisioning Process Flows, the Technical & Operational Task Force determined that the work underway in the seven Number Portability Administration Center regions was producing essentially equivalent technical and operational specifications and procedures, so that carriers effectively were not duplicating efforts across the regions.<sup>142</sup> Finding that the regionally-developed specifications adequately add

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<sup>136</sup> *Technical and Operational Task Force Report* at § 5.1.

<sup>137</sup> *See* ¶ 26, *supra*.

<sup>138</sup> *Working Group Report* at § 2.5.1.

<sup>139</sup> *See id.* at § 2.5.3.

<sup>140</sup> *Technical & Operational Task Force Report* at § 7 and Appendix B -- "Inter-Service Provider LNP Operations Flows." "Inter-service provider" processes refer to the ways in which service providers transfer information between and among themselves. This document describes the various inter-service provider and Number Portability Administration Center Service Management System processes, describing the specific processes by which local number portability functions are executed, such as the process by which a customer's service is transferred from the customer's original service provider to the customer's new service provider.

<sup>141</sup> *Working Group Report* at § 2.5.1.

<sup>142</sup> *Technical & Operational Task Force* at § 5.2. The similarities across regions were, in large part, due to the fact that a small number of carriers, such as AT&T and MCI, participated in each region's efforts, and proposed similar standards in each region. In addition, each of the regions drew extensively from the pioneering efforts of the Illinois Commerce Commission's number portability work.

the number portability implementation issues, the Technical & Operational Task Force modified, updated and standardized the regional documents,<sup>143</sup> and the NANC recommends adoption of these Number Portability Administration Center Service Management System technical and operational specifications as industry stan

## 2. Positions of the Parties

50. None of the comments filed with the Commission in this phase of the number portability proceeding challenges the need for national technical and operational standards. The General Services Administration (GSA) recommends that the Commission adopt the standards detailed in the *Working Group Report*, and state that replacing disparate regional approaches with uniform national standards will facilitate the development of open competition, result in cost savings, and help to ensure higher quality services for end users.<sup>145</sup> GSA also contends that the Commission should convene a proceeding to develop national guidelines for state regulatory authorities to use in developing standards for (1) dialing parity; (2) access by competing carriers to the incumbent facilities for interconnection; (3) coordination of repair activities among interconnected carriers; and (4) access to operations support systems.<sup>146</sup>

## 3. Discussion

51. We applaud the extraordinary efforts of the NANC, the industry, the state commissions and the state/regional workshops in developing, in a relatively short time, technical and operational standards and procedures in order to meet our local number portability implementation schedule. As discussed below, we adopt the technical and operational standards and procedures recommended by the NANC as set forth in the *Working Group Report*.<sup>147</sup> We decline, however, to grant GSA's request that we convene a proceeding to develop national guidelines for state regulatory authorities to use in developing standards for dialing parity, access by competing carriers to the incumbent's facilities for interconnection, coordination of repair activities among interconnected carriers, and access to operations support systems at this time.<sup>148</sup> These issues do not directly concern the N

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*Architecture Task Force Report* at § 5.

<sup>143</sup> *Technical and Operational Task Force Report* at § 5.2.

<sup>144</sup> *Working Group Report* at § 6.7.

<sup>145</sup> GSA Comments at 3.

<sup>146</sup> *Id.* at 4.

<sup>147</sup> In ¶ 128, *infra*, the Commission directs the NANC to continue to monitor local number portability implementation and general oversight of number portability administration on an ongoing basis.

<sup>148</sup> GSA Comments at 4.

recommendations relating to number portability administration and, thus, are beyond the scope of this proceeding. The Commission, in fact, has already been addressing development of national guidelines for interconnection activities, operations support systems,<sup>149</sup> and dialing parity<sup>150</sup> in other Commission proceedings. We note further that LCI International Telecom Corp. and the Competitive Telecommunications Association have filed a Petition for Expedited Rulemaking, asking the Commission to initiate a rulemaking in which the Commission ultimately adopt reporting requirements and performance standards governing operations support systems. We have so comment on that petition.<sup>151</sup>

**a. Uniform National Standards**

52. We agree with the NANC that the adoption of uniform Functional Requirements Specification, Interoperable Interface Specification, Provisioning Process Flows, policy for the porting of reserved and unassigned numbers, and compliance and change management processes would provide significant advantages for the implementation of local number portability. We conclude that uniform national standards in this area will promote efficient and consistent use of number portability methods and numbering resources on a nationwide basis, ensure interoperability of networks, and facilitate the ability of carriers to meet number portability implementation requirements. We further conclude that uniform national standards should minimize expenditure of time and resources, maximize use of local number portability resources for all companies, produce timely and cost effective offers of local number portability related products, enable switch vendors to spread their costs over a larger base of customers, eliminate need to develop several different versions of number portability software, and improve service quality for carriers providing service in multiple regions.<sup>152</sup>

53. We find that it is advantageous to all companies to maintain standard system requirements and processes to gain maximum efficiency and effectiveness in all local number portability functions. Uniform r

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<sup>149</sup> *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order*, 11 FCC Rcd 15499, 15591-92, 15660-01, 15767-68, ¶¶ 179-80, 316, 525-28 (1996) (*Local Competition Order*), *Order Reconsideration*, 11 FCC Rcd 13042 (1996), *Second Order on Reconsideration*, 11 FCC Rcd 19738 (1996), *pets. for further recon. pending*. The First Report and Order was affirmed in part and vacated in part. See *Iowa Util. Bd. v. FCC and consolidated cases*, No. 96-3321 *et. al.*, \_\_\_ F.3d \_\_\_, 1997 WL 403401 (8th Cir. July 18, 1997).

<sup>150</sup> See *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Second Report and Order and Memorandum Opinion and Order*, FCC 96-333 (rel. Aug. 8, 1996), 61 Fed. Reg. 47284 (1996), *pets. for recon. pending, pets. for review pending sub nom., Bell Atlantic Telephone Companies et al. v. FCC et al.*, D.C. Cir. No. 96-1333, and consolidated case, D.C. Cir. No. 96-1337 (filed Sept. 16, 1996), and *People of the State of California, et. al., v. FCC*, 8th Cir. No. 96-3519, *mot. pending to sever and transfer to D.C. Cir.* (originally filed in D.C. Cir. Sept. 23, 1996).

<sup>151</sup> *Comments Requested on Petition for Expedited Rulemaking to Establish Reporting Requirements and Performance and Technical Standards for Operations Support Systems*, Public Notice, RM 9101, DA 97-1211 (rel. June 10, 1997).

<sup>152</sup> See *Working Group Report* at § 6.7.5.2.

standards will also be particularly helpful to incumbent carriers, such as GTE, that operate in multiple regional markets, and to new entrants, such as AT&T and MCI, that may seek to enter the local exchange market on a national scale. Furthermore, uniform national standards will allow vendors to develop standard products rather than multiple versions of hardware and software necessary to implement local number portability based on regional differences, resulting in more timely and cost effective product offerings for local service providers.<sup>153</sup>

**b. Specific Technical Standards Addressed by the Technical & Operational Task Force**

54. We conclude that the NANC's recommended technical and operational standards are consistent with the Commission's performance criteria for implementing local number portability.<sup>154</sup> In adopting the standards currently set forth in the *Working Group Report*, the *Architecture Task Force Report*, the *Technical & Operational Task Force Report* and their Appendices as a framework for implementation of local number portability, we recognize that ongoing changes to these specifications and processes likely will be needed as the industry gains operational experience in implementing long-term number portability.<sup>155</sup> We urge the industry, working under the auspices of the NANC, to maintain, update and modify the technical and operational standards as necessary, and to establish a long-term compliance process for service providers and local number portability administrators.

55. Number Portability Administration Center Service Management System Provisioning Process Flows (Provisioning Process Flows). We adopt the Provisioning Process Flows as set forth in the *Technical & Operational Task Force Report*<sup>156</sup> and recommended by the NANC as industry standards for use in each Number Portability Administration Center region.

56. Provisioning process flows are the detailed, standard procedures by which service providers and database administrators communicate between and among one another to port a telephone number to a new service provider, to cancel a porting request, to disconnect a ported number, or to deal with conflicts between, or among, service providers.<sup>157</sup> The Technical & Operational Task Force developed, and the NANC recommends Com

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<sup>153</sup> *Technical & Operational Task Force* at § 5.2.

<sup>154</sup> The Commission's performance criteria for long-term number portability solutions are set forth at n.24, *supra*.

<sup>155</sup> In addition, future modifications to these standards may be required in order to permit CMRS providers to provide local number portability and to meet the changing demands of the industry in the most effective and efficient manner possible given changing and market conditions. Future modifications are discussed in ¶¶ 128-132, *infra*.

<sup>156</sup> Pictorial representations and associated descriptions of these provisioning process flows are documented in the *Technical & Operational Task Force Report* at Appendix B -- "Inter-Service Provider LNP Operations Flows."

<sup>157</sup> *Id.*

adoption of, standard processes to carry out every operation needed to implement local number portability.<sup>158</sup> The primary Provisioning Process Flow diagram lays out the general process by which a customer's telephone number is ported from the customer's original service provider to the customer's newly-requested service provider.<sup>159</sup> The subsequent Provisioning Process Flow diagrams set forth the processes by which service providers and local number portability administrators handle specific scenarios, such as porting numbers with or without unconditional dialing triggers,<sup>160</sup> cancelling porting requests,<sup>161</sup> disconnecting ported numbers,<sup>162</sup> arranging audits of service providers to assist in resolution of repair problems,<sup>163</sup> and resolving conflicts between service providers.<sup>164</sup>

57. In developing industry standard Provisioning Process Flows, the Technical & Operational Task Force adopted the Illinois local number portability provisioning process flows and associated descriptions as a point of reference for developing and refining its own Provisioning Process Flows.<sup>165</sup> The Technical & Operational Task Force reviewed each Provisioning Process Flow scenario and modified each one to ensure industry-wide endorsement.<sup>166</sup> The members of the Technical & Operational Task Force also reviewed and modified the associated Provisioning Process Flow descriptions until each member of the team could endorse the selected language.<sup>167</sup>

58. We conclude that the uniform standards for Provisioning Process Flows proposed by the NANC are essential to the efficient deployment of local number portability across the nation. In particular, we find that the Provisioning Process Flows will help ensure that communication between and among service providers (using Service Management Systems) and local number portability administrators (using Number Portability Administration Center Service Management Systems) proceed in a clear and orderly fashion so that number portability requests are handled in an efficient and timely manner. We note that no commenter opposed adoption of these standard Provisioning Process Flows. We direct the NANC to make recommendations regarding future modifications.

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<sup>158</sup> *Technical and Operational Task Force Report* at § 7.2.

<sup>159</sup> *Id.* at Appendix B -- "Inter-Service Provider LNP Operations Flows," Figure 1.

<sup>160</sup> *Id.* at Figures 2-3.

<sup>161</sup> *Id.* at Figure 5.

<sup>162</sup> *Id.* at Figure 7.

<sup>163</sup> *Id.* at Figure 8.

<sup>164</sup> *Id.* at Figures 4, 6.

<sup>165</sup> *Id.* at § 7.1.

<sup>166</sup> *Id.* at § 7.2.

<sup>167</sup> *Id.*

Commission as necessary, consistent with the procedures set forth in ¶¶ 128-132, *infra*.

59. Number Portability Administration Center Service Management System Standards -- Functional Requirements Specification. We adopt the NANC's recommendation that local number portability administrators be any entity directly connecting to the Number Portability Administration Center Service Management System required to use the Number Portability Administration Center Service Management System Functional Requirements Specification (Functional Requirements Specification or FRS) as described in the *North American Numbering Council -- Functional Requirements Specification -- Number Portability Administration Center - Service Management System*, Version 1.1, dated May 5, 1997 (*NANC FRS*).<sup>168</sup> The *NANC FRS* will serve as an industry standard for use in developing and maintaining the Number Portability Administration Center Service Management System in each of the seven Number Portability Administration Center regions.

60. The Number Portability Administration Center Service Management System is a hardware and software platform that contains the database of information required to route ported numbers to the appropriate service provider.<sup>169</sup> In general, the Number Portability Administration Center Service Management System maintains customer information from both the current and new service providers, validates the information received, and provides the new routing information available for downloads to local service management systems when an "activate" message is received indicating that the customer has been physically connected to the new service provider's network.<sup>170</sup> The Number Portability Administration Center Service Management System contains a record of ported numbers and a history file of all transactions relating to the porting of a number.<sup>171</sup> The Number Portability Administration Center Service Management System also provides audit functionality and the ability to transmit routing information to service providers to maintain synchronization of the service providers' network elements to support portability.<sup>172</sup>

61. We note that no commenters oppose adoption of the *NANC FRS* as an industry standard. As pointed out by CTIA<sup>173</sup> and acknowledged by the NANC,<sup>174</sup> however, the *NANC FRS* was developed primarily to support the provisioning of wireline number portability. The NANC has not fully considered or developed a

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<sup>168</sup> *Id.* at Appendix C. The *NANC FRS* is available for review on the Internet at <http://www.npac.com>

<sup>169</sup> *Technical & Operational Task Force Report* at § 8.2.

<sup>170</sup> *Id.*

<sup>171</sup> *Id.*

<sup>172</sup> *Id.*

<sup>173</sup> CTIA Comments at 2.

<sup>174</sup> *Working Group Report* at § 3.

number portability requirements applicable to CMRS providers. Therefore, modifications to the *NANC FRS* be required to support wireless number portability. As discussed in more detail below, we direct the NANC recommend modifications to the *NANC FRS* as necessary to support wireless number portability,<sup>175</sup> consider the procedures set forth in ¶¶ 128-132, *infra*.

62. Number Portability Administration Center Service Management System Standards -- Interoperable Interface Specification. We adopt the NANC's recommendation that the local number portability administration any entity directly connecting to the Number Portability Administration Center Service Management System Number Portability Administration Center Service Management System Interoperable Interface Specification (Interoperable Interface Specification or IIS) as described in the *North American Numbering Council -- Interoperable Interface Specification -- Number Portability Administration Center -- Service Management System*, Version 1.0, dated April 7, 1997 (*NANC IIS*).<sup>176</sup> The *NANC IIS* will serve as an industry standard for use in developing and maintaining the Number Portability Administration Center Service Management System interfaces in each of the seven Number Portability Administration Center regions.<sup>177</sup>

63. The *NANC IIS* defines the Number Portability Administration Center Service Management System mechanized interfaces. These interfaces reflect the functionality defined in the Functional Requirement Specification. Both Service Order Administration (SOA) and local Service Management System interfaces to Number Portability Administration Center Service Management System are described in the *NANC IIS*.<sup>178</sup>

64. We note that no commenters oppose adoption of this standard. We recognize, however, that, CTIA argues, the *NANC IIS* was developed primarily to support wireline number portability.<sup>179</sup> The NANC fully considered or developed unique wireless number portability requirements. Therefore, modifications to

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<sup>175</sup> See ¶ 92, *infra*.

<sup>176</sup> *Technical and Operational Task Force Report* at Appendix D. The *NANC IIS* is available for review on the Internet at <http://www.npac.com>.

<sup>177</sup> *Technical and Operational Task Force Report* at § 9.

<sup>178</sup> *Id.* at § 9.2. The interfaces are referred to as the SOA-to-NPAC SMS interface and the NPAC SMS-to-LSMS (local Service Management System) interface, respectively. The SOA-to-NPAC SMS interface, which allows communication between a service provider's operations support systems and the Number Portability Administration Center Service Management System, supports the creation and maintenance of subscriber information, indicating whether a number has been ported and, if so, including the telephone number and location routing information. The NPAC SMS-to-LSMS interface is used for communications between a service provider's local Service Management System and the Number Portability Administration Center Service Management System so that local Service Management Systems can download the mobile number ported numbers and routing information.

<sup>179</sup> See CTIA Comments at 2; *Working Group Report* at § 3.

*NANC IIS* may be required to support wireless number portability.<sup>180</sup> As discussed more fully below, we direct *NANC* to recommend modifications to the *NANC IIS* as necessary to support wireless number portability,<sup>181</sup> consistent with the procedures set forth in ¶¶ 128-132, *infra*.

65. Policy for the Porting of Reserved and Unassigned Numbers and Compliance Process. We accept the *NANC*'s recommendations relating to the porting of reserved and unassigned numbers developed and documented in the *Architecture Task Force Report*.<sup>182</sup> Specifically, the *NANC* recommends that customers should be allowed to port telephone numbers that they have reserved under a legally enforceable written agreement but not been activated.<sup>183</sup> The *NANC* further recommends that such reserved numbers: (1) be treated as discontinued telephone numbers when the customer is disconnected or when the service is moved to another service provider if the reserved numbers are not ported to subsequent service providers; and (2) may not be used by another customer. The *Architecture Task Force* points out that implementation of the capability to port reserved numbers may require modifications to operational support systems and may not be available initially.<sup>185</sup> The *NANC* also recommends that service providers not be allowed to port unassigned numbers unless and until there is an explicit authorization from such porting from a regulator with appropriate jurisdiction.<sup>186</sup>

66. Bell Atlantic and NYNEX do not challenge the *NANC*'s recommendation that customers be allowed to port numbers which they have reserved but not activated.<sup>187</sup> Bell Atlantic and NYNEX assert, however, that "reserved telephone numbers should not be ported until there is a way to administer the [numbering] resource mechanism for ensuring that [numbers reserved for one customer] are not used for another customer."<sup>188</sup> Bell Atlantic and NYNEX appear concerned that, after a customer ports its activated and reserved numbers to another service provider, that customer may then relinquish the reserved numbers to the new service provider, thereby removing such numbers from the control of the original service provider. Bell Atlantic and NYNEX contend that "guidelines must be developed to ensure that there is consistency in the industry and that there is no abuse" c

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<sup>180</sup> *Technical & Operational Task Force Report* at § 9.5.

<sup>181</sup> See ¶ 92, *infra*.

<sup>182</sup> *Architecture Task Force Report* at § 7.7; see also *Technical & Operational Task Force Report* at § 10.1.

<sup>183</sup> *Architecture Task Force Report* at § 7.7.

<sup>184</sup> *Id.*

<sup>185</sup> *Id.*

<sup>186</sup> *Id.* at § 7.7.2; *Technical & Operational Task Force* at § 10.1, Appendix A-2.

<sup>187</sup> Bell Atlantic/NYNEX Comments at 7.

<sup>188</sup> *Id.* at 8.

policy for porting reserved numbers.<sup>189</sup> In adopting the NANC's recommendation for the porting of reserved unassigned numbers policy, we direct the NANC to monitor the implementation of this policy, and make appropriate recommendations to the Commission, including, if deemed necessary by the NANC, guidelines for administered unassigned numbers that are no longer reserved by the customer that originally ported them.

67. We also conclude that the NANC has recommended a reasonable process for enforcing compliance with the policy pertaining to the porting of reserved and unassigned numbers.<sup>190</sup> If a service provider finds itself disadvantaged by instances of non-compliance with the policy for the porting of reserved and unassigned numbers, another service provider, the NANC recommends several courses of action. First, the aggrieved service provider should contact the service provider with which it has a dispute to resolve the issue through informal negotiations. Should these efforts prove unsuccessful, the aggrieved service provider may bring the issue to the regional LLC for resolution via the LLC's dispute resolution process,<sup>191</sup> to the NANC, to the state public utilities commission, or to other forums deemed appropriate by the service provider.<sup>192</sup>

68. **Change Management Process.** The NANC states that changing technological and market conditions, as well as other unforeseen circumstances, may necessitate ongoing oversight of, and future modification to, the local number portability architectural, technical and operational standards.<sup>193</sup> The NANC therefore recommends the adoption of standard procedures to control the process for designing, developing, testing, and implementing changes to the Number Portability Administration Center Service Management Systems, the Provisioning Process Flows, the Functional Requirements Specification, the Interoperable Interface Specifics, and other related specifications and processes (change management process).<sup>194</sup> The NANC also recommends that the Commission designate a neutral entity, preferably the NANC, to approve or disapprove all Number Portability Administration Service Management System changes, and that each respective regional LLC manage implementation of these changes with its respective local number portability administrator.<sup>195</sup> The NANC recommends that in the event the NANC is dissolved, the Commission establish or identify an oversight body to support and approve

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<sup>189</sup> *Id.* at 7-8.

<sup>190</sup> *Working Group Report* at § 6.7.3.4; *Technical & Operational Task Force Report* at § 10.2.

<sup>191</sup> *Technical and Operational Task Force Report* at § 10.2.4; *see also* ¶ 115, *infra*.

<sup>192</sup> *Working Group Report* at § 6.7.3.4; *Technical & Operational Task Force Report* at § 10.2.4.

<sup>193</sup> *Working Group Report* at § 7.1.1D.

<sup>194</sup> *Technical & Operational Task Force Report* at § 11.2.1. These change management processes include the definition of standard change request documents, procedures for the submission and distribution of requests, and timetables for the process of consideration and prioritization of such requests.

<sup>195</sup> *Architecture Task Force Report* at § 12.3.1; *see also Working Group Report* at § 7.1.1D; *Technical and Operational Task Force Report* at § 11.2.

Number Portability Administration Center Service Management System architecture changes.<sup>196</sup>

69. We adopt the NANC's recommendations concerning the change management process. We agree with the NANC that it is important that a neutral entity oversee the change management process, so that: (1) consistency in the submission and consideration of changes to the architectural, technical and operational specifications and procedures; (2) uniform processes are implemented; and (3) no individual carriers or industry segments are disadvantaged.<sup>197</sup> We find that the NANC's proposed change management process will enable the industry to make changes to the architectural, technical and operational specifications and procedures in a timely and uniform manner. The role of the regional LLCs in managing changes to the number portability technical and operational specifications, however, is subject to our planned review of the role of the regional LLCs in implementing long-term number portability.<sup>198</sup> We direct the NANC to continue its oversight of architectural, technical and operational change management processes and to make additional recommendations to the Commission as not inconsistent with the procedures set forth in ¶ 128, *infra*. In the event the NANC is dissolved at some point in the future, we will, at that time, either establish or select an oversight body to perform the change management functions now delegated to the NANC.

**c. Additional Technical and Operational Issues**

70. In addition to the issues considered by the Technical & Operational Task Force, the Architecture Task Force addressed several technical matters that have been incorporated into the NANC recommendation. The Technical & Operational Task Force, the Architecture Task Force reviewed the process used in each state region to develop the Functional Requirements Specification and Interoperable Interface Specification and determined that the Number Portability Administration Center roles and responsibilities defined in those specifications were substantially similar.<sup>200</sup> The Architecture Task Force also found that the Functional Requirements Specification and Interoperable Interface Specification thoroughly document standard functions necessary to administer the Number Portability Administration Center Service Management System, the interfaces between the Number Portability Administration Center Service Management System and the various service providers, as well as the administrative functions to be performed by the local number portability administrators.<sup>201</sup> Like the Technical & Operational

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<sup>196</sup> *Architecture Task Force Report* at § 12.3.1.

<sup>197</sup> *Technical & Operational Task Force Report* at § 11.2.2.

<sup>198</sup> See ¶ 114, *infra*, for a discussion of the ongoing role of the regional LLCs in implementing and overseeing long-term number portability.

<sup>199</sup> *Architecture Task Force Report* at § 7.

<sup>200</sup> *Working Group Report* at § 6.5.3.

<sup>201</sup> *Architecture Task Force Report* at § 12.1.

Force, the consensus in the Architecture Task Force called for adoption of the *NANC FRS* and the *NANC IIS* which set forth the Number Portability Administration Center Service Management System Functional Requirement Specification and the Interoperable Interface Specification.<sup>202</sup>

71. The NANC indicates that the recommendations derived from the *Architecture Task Force Report* were the result of extensive debate in the Architecture Task Force and represent industry consensus.<sup>203</sup> One exception discussed more fully below,<sup>204</sup> no parties have specifically challenged the local number portability architectural specifications and assumptions as set forth in the *Architecture Task Force Report*. We conclude that these recommendations set forth reasonable Number Portability Administration Center standards to manage local number portability. Thus, we adopt the NANC's recommendations, as presented in the *Architecture Task Force Report*.

72. The *Architecture Task Force Report* considered and made recommendations on several issues which were not otherwise addressed in the *Technical & Operational Task Force Report*, including the following: (1) what entity shall be required to make the query to determine the service provider of the caller (N-1 Call Routing);<sup>205</sup> and (2) whether carriers may block default routed calls (Default Routing).<sup>206</sup> Because these two specific issues will have a significant impact on the efficiency and effectiveness of local number portability, they will be discussed more fully below.

73. N-1 Call Routing. The NANC recommends that the carrier in the call routing process immediately preceding the terminating carrier, designated the "N-1" carrier,<sup>207</sup> be responsible for ensuring that database queries are performed.<sup>208</sup> None of the parties commenting on the NANC's recommendations addresses this issue. We adopt the NANC's recommendation that the N-1 carrier be responsible for ensuring that databases are queried, as necessary to effectuate number portability. The N-1 carrier can meet this obligation by either querying the number portability

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<sup>202</sup> *Id.*

<sup>203</sup> *Working Group Report* at §§ 2.6, 6.5.5.

<sup>204</sup> CTIA's concern regarding the potentially discriminatory effect of default routing on CMRS providers is discussed at ¶¶

<sup>205</sup> *Architecture Task Force Report* at § 7.8.

<sup>206</sup> *Id.* at § 7.10. A default routed call is a call that is transported to the customer's original local exchange carrier without being queried to determine whether the customer has ported the number to another local exchange carrier. See ¶¶ 76-78, *infra*.

<sup>207</sup> The "N" carrier is the entity terminating the call to the end user, and the "N-1" carrier is the entity transferring the call to the terminating carrier.

<sup>208</sup> *Architecture Task Force Report* at § 7.8 and Attachment A -- "Example N-1 Call Scenarios." The NANC's recommendation of N-1 call routing is based on the assumption that service providers will use Location Routing Number as the database method for determining local number portability. See *Architecture Task Force Report* at § 7.2. For a discussion of the Location Routing Number system, see ¶ 8, *supra*.

database itself or by arranging with another entity to perform database queries on behalf of the N-1 carrier.

74. In the *First Order on Reconsideration*, the Commission recognized that queries would most likely be performed by the N-1 carrier if the industry adopted the Location Routing Number solution.<sup>209</sup> Ind consensus is that the Location Routing Number system is the best method to satisfy the Commission's performance criteria for long-term local number portability.<sup>210</sup> The efficient provisioning of number portability requires that carriers know who bears responsibility for performing queries, so that calls are not dropped because the carrier is uncertain who should perform the database query, and so that carriers can design their networks accordingly to arrange to have database queries performed by another entity. Consistent with our finding in the *First Order on Reconsideration*, we conclude that the Location Routing Number system functions best if the N-1 carrier bears responsibility for ensuring that the call routing query is performed.<sup>211</sup> Under the Location Routing Number system requiring call-terminating carriers to perform all queries may impose too great a burden on terminating LECs. In addition, obligating incumbent LECs to perform all call routing queries could impair network reliability.<sup>212</sup>

75. We note, however, that the requirement that the N-1 carrier be responsible for ensuring completion of the database query applies only in the context of Location Routing Number as the long-term number portability solution. In the event that Location Routing Number is supplanted by another method of providing long-term number portability, we may modify the call routing process as necessary. We note further that if the N-1 carrier does not perform the query, but rather relies on some other entity to perform the query, that other entity may charge the carrier, in accordance with guidelines the Commission will establish to govern long-term number portability allocation and recovery.<sup>213</sup>

76. Default Routing. The NANC recommends that we permit carriers to block "default routed calls" from coming into their networks.<sup>214</sup> A "default routed call" situation would occur in a Location Routing Number system

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<sup>209</sup> *First Order on Reconsideration* at ¶ 125.

<sup>210</sup> See *First Order on Reconsideration* at ¶¶ 8-9. For a discussion of the Commission's performance criteria, see ¶ 7, *supra*. The NANC has assumed that the Location Routing Number system will serve as the database method to implement local number portability. The NANC has developed its specifications and procedures in conformance with proper functioning of the Location Routing Number system. See *Architecture Task Force Report* at § 7.2. The state commissions, state and regional workshops and the industry are all relying on the Location Routing Number system as the database method to implement long-term number portability. See *First Order on Reconsideration* at ¶¶ 8-9; see also ¶ 8, *supra*.

<sup>211</sup> *First Order on Reconsideration* at ¶ 125.

<sup>212</sup> See US West *Ex Parte* Presentation at 6-8, CC Docket No. 95-116, filed June 5, 1997 (US West June 5, 1997 *Ex Parte* Presentation); see also *First Order on Reconsideration* at ¶¶ 124-125.

<sup>213</sup> See *First Order on Reconsideration* at ¶ 126.

<sup>214</sup> *Architecture Task Force Report* at § 7.10.

follows: when a call is made to a telephone number in an exchange with any ported numbers, the N-1 carrier (contracted entity) queries a local Service Management System database to determine if the called number has been ported. If the N-1 carrier fails to perform the query, the call is routed, *by default*, to the LEC that originally served the telephone number. The original LEC, which may or may not still be serving the called number, can either query the local Service Management System and complete the call, or "block" the call, sending a message back to the N-1 carrier that the call cannot be delivered. The NANC found that compelling LECs to query all default routed calls could significantly impair network reliability, and that allowing carriers to block default routed calls coming into their networks could be necessary to protect against overload or congestion that could result from an inordinate number of calls being routed by default to the original LEC.<sup>215</sup> In light of these network reliability concerns, we will allow LECs to block default routed calls, but only in specific circumstances when failure to do so is likely to impair network reliability.

77. CTIA argues that the NANC's default routing recommendation will significantly, and negatively, affect CMRS providers.<sup>216</sup> According to CTIA, even if number portability is limited initially to the wireline carriers, CMRS providers must still modify their method of routing calls from their customers to wireline customers who have ported their numbers. During the period prior to December 31, 1998, the date by which CMRS providers are required to have the capability to deliver calls to ported numbers,<sup>217</sup> CMRS providers that have not yet implemented this capability will be required to rely on default routing to complete subscriber calls. CTIA argues that default routing of calls should not be blocked, because "[a]llowing incumbent LECs to block default routed calls when they may be acting as the only means of conducting a query and, thus, allowing a call to be completed, would discriminate against wireless carriers . . . ."<sup>218</sup>

78. In the *First Report & Order*, we required CMRS providers to have the capability of querying number portability database systems in order to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998.<sup>219</sup> We established this deadline so that CMRS providers would have the ability to route calls from their customers to a wireline customer who has ported his or her number, by the time a substantial number of wireline customers have the ability to port their numbers between wireline carriers.<sup>220</sup> Under this deployment schedule, the initial deployment of long-term local number portability for wireline carriers will occur prior to the date by which CMRS providers must be able to perform database queries. During this period, CMRS providers are not obligated by our rules to perform call routing queries or to arrange for other entities to perform

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<sup>215</sup> *Id.*

<sup>216</sup> CTIA Comments at 4.

<sup>217</sup> *First Report & Order*, 11 FCC Rcd at 8439-40, ¶ 165.

<sup>218</sup> CTIA Comments at 5.

<sup>219</sup> *First Report & Order*, 11 FCC Rcd at 8439-40, ¶ 165.

<sup>220</sup> *Id.*

queries on their behalf. Thus, if wireline LECs are allowed to block default routed calls, calls originating on networks (to the extent that the CMRS provider is the N-1 carrier) could be blocked. For this reason, we will allow LECs to block default routed calls when performing database queries on default routed calls is likely to impair network reliability. We also require LECs to apply this blocking standard to calls from all carriers on a nondiscriminatory basis. In the event that a CMRS or other service provider believes that a LEC is blocking under circumstances unlikely to impair network reliability, such service provider may bring the issue before NANC. We direct the NANC to act expeditiously on these issues. Although CMRS providers are not responsible for blocking queries until December 31, 1998, we urge them to make arrangements with LECs as soon as possible that their calls are not blocked. We note that if a LEC performs database queries on default routed calls, the charge the N-1 carrier, pursuant to guidelines the Commission will establish regarding long-term number portability cost allocation and recovery.<sup>221</sup>

79. Disconnected Ported Numbers. The NANC also recommends that when a ported telephone number is disconnected, that telephone number be released or "snapped-back" to the original service provider assigned to that NXX.<sup>222</sup> None of the commenters challenges this recommendation. Although Bell Atlantic and NYNEX assume that guidelines must be developed to ensure consistent application of the "snap back" policy and to ensure that parties do not "abuse" the "snap-back" policy,<sup>223</sup> they do not suggest specific guidelines for avoiding these problems. We find this NANC recommendation reasonable and the result of industry-wide consensus. Accordingly, we adopt this recommendation. We ask the NANC to prepare recommendations, consistent with the procedures set forth in Section 132, *infra*, to clarify the policy if it determines that there is confusion among the industry regarding its application. We urge Bell Atlantic and NYNEX to suggest specific proposals for guidelines to the NANC for consideration in connection with the NANC's preparation of further recommendations.

80. High Volume Call-In Networks. The Architecture Task Force did not reach consensus on how to provide local number portability to high volume call-in networks.<sup>224</sup> Currently, a service provider may move

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<sup>221</sup> See *First Order on Reconsideration* at ¶ 126.

<sup>222</sup> *Architecture Task Force Report* at § 7.9. Under the North American Numbering Plan, telephone numbers consist of ten digits in the form NPA-NXX-XXXX, where N may be any number from 2 to 9 and X may be any number from 0 to 9. Numbering plans for NPAs are known commonly as area codes. The second three digits of a telephone number are known as the NXX code. Typically, the NXX code identifies the central office switch to which the telephone number had been assigned or central office code (CO). Each NPX has a total of 10,000 different telephone numbers. Because an NPA-NXX is only served by a single end office in today's public switched telephone network, the telephone number identifies the subscriber, as well as the actual end office, or telephone switching system, that serves the subscriber. In effect, the dialed NPA-NXX is the terminating switch's routing address to the rest of the network. With the implementation of local number portability, which allows any number of local service providers to serve the same NPA-NXX, this routing scheme is no longer used. *Numbering Plan Order*, 11 FCC Rcd at 2593-94.

<sup>223</sup> Bell Atlantic/NYNEX Comments at 7-8.

<sup>224</sup> *Architecture Task Force Report* at § 7.13. A high volume call-in network is a network designated specifically for a customer that generates large volumes of terminating traffic over a short period of time, such as a radio station that holds contests requiring

customer's telephone number(s) to a high volume call-in network when the service provider determines that customer regularly generates large volumes of terminating traffic over a short period of time, so that the surge telephone calls will not overload the network. A high volume call-in network allows all such customers to be assigned numbers in an NPA-NXX (*e.g.*, 213-520) dedicated for high volume call-in. Switches in the network be designed to segregate traffic for high volume call-in numbers and route it via trunk groups that are dedicated network and do not overflow to other trunk groups. The dedicated trunks are engineered to handle a particular load and, in this way, traffic volumes are limited, and traffic to high calling volume numbers cannot congest network. According to the findings of the Architecture Task Force, such networks can effectively limit network congestion caused by large call-in events.<sup>225</sup>

81. The Location Routing Number method for local number portability requires a database query performed on calls to portable NPA-NXXs before route selection takes place. If high volume call-in network numbers are portable, they could generate large volumes of queries that could congest the Service Control Point. Also, if a high volume call-in network number is ported and a location routing number is returned in the database response, the call will not be routed via trunks dedicated to high volume call-in networks. This congestion could affect other services and compromise the design of high volume call-in network networks.<sup>227</sup> The Architecture Task Force suggests that one way to avoid this problem is to prohibit database queries for numbers attached to switches serving high volume call-in network networks.<sup>228</sup>

82. Bell Atlantic and NYNEX contend that the NANC must conduct further study before high volume call-in numbers are ported to ensure that calls to such numbers do not cause network congestion.<sup>229</sup> We agree additional study is necessary before we allow porting of numbers to high volume call-in networks. We, therefore, urge the industry, under the auspices of the NANC, to study this matter further and prepare recommendation best to incorporate high volume call-in networks into the local number portability scheme. We direct the NANC to continue to examine this matter and make recommendations to the Commission consistent with the procedure forth in ¶¶ 128-132, *infra*.

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to call simultaneously. A high volume call-in network allows for these surges in telephone calls without overloading the network customer that simply generates a large volume of terminating traffic on a more consistent basis would not be transferred to a high network.

<sup>225</sup> *Id.*

<sup>226</sup> *Id.* Service Control Points are discussed at n.29, *supra*.

<sup>227</sup> *Architecture Task Force Report* at § 7.13.

<sup>228</sup> *Id.*

<sup>229</sup> Bell Atlantic/NYNEX Comments at 8.

## C. Numbering Information Sharing

### 1. Background

83. In the *First Report & Order*, the Commission noted that "it will be essential for the [North American Numbering Plan Administrator] to keep track of information regarding the porting of numbers bet among carriers."<sup>230</sup> The Commission, therefore, directed the NANC "to set guidelines and standards by which [North American Numbering Plan Administrator] and [local number portability administrators] share number information so that both entities can efficiently and effectively administer the assignment of the numbering resource."<sup>231</sup> The NANC determined that the manner in which the North American Numbering Plan Administrator and the local number portability administrators might share numbering information is an aspect of number portability outside the scope of the Working Group's immediate mission.<sup>232</sup> As a result, the NANC did not make any recommendations with respect to the sharing of numbering information.<sup>233</sup> The NANC acknowledges, however, "[n]umber pooling and any other steps required to achieve number utilization efficiency are a short term priority." The NANC added that "[t]o ensure a coordinated number pooling effort, interaction between the [North American Numbering Plan Administrator] and the [local number portability administrators] is required during the design, development, and implementation of number pooling."<sup>235</sup> As such, the NANC recommends that its Local Numbering

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<sup>230</sup> *First Report & Order*, 11 FCC Rcd at 8402, ¶ 95.

<sup>231</sup> *Id.* As an example, the Commission suggested that the NANC might require that the Service Management System data integrate with 911 databases.

<sup>232</sup> *Working Group Report* at § 6.8.1. According to the Industry Numbering Committee (INC):

Pooling of geographic numbers in a local number portability environment is a number administration and assignment process that allocates numbering resources to a shared reservoir associated with a designated geographic area. The designated geographic area is limited to an existing rate center within a geographic NPA. The numbering resource shared reservoir would be available, potentially, in blocks of numbers or on an individual number basis, for as many as competing service providers participating in local number portability for the purpose of providing services to consumers in that area.

Industry Numbering Committee, Status Report on Issue 105 -- Number Pooling at 6 (June 10, 1997). The INC is a standing committee of the Industry Carriers Compatibility Forum (ICCF), which in turn exists under the auspices of the Carrier Liaison Committee (CLC) for Telecommunications Industry Solutions (ATIS). ATIS sponsors a number of industry committees and forums, including the INC. The CLC seeks to resolve, through consensus procedures, equal access and network interconnection issues arising on a company-wide industry-wide basis.

<sup>233</sup> *Working Group Report* at § 6.8.

<sup>234</sup> *Id.* at § 7.1.1A.

<sup>235</sup> *Id.*

Portability Administration Selection and North American Numbering Plan Administration Working Groups jointly in support of number utilization efficiency.<sup>236</sup>

## 2. Positions of the Parties

84. CTIA notes that some state commissions are already moving towards mandating number pooling order to conserve numbering resources.<sup>237</sup> CTIA asserts that such number pooling requires that all carriers have access to the same shared reservoir of numbers.<sup>238</sup> Given the staggered implementation dates of wireless and number portability, however, CTIA contends that "mandating number pooling would unfairly disadvantage carriers in their ability to have access to increasingly scarce number resources."<sup>239</sup> Until CMRS providers are incorporated into the local number portability environment, CTIA is concerned that such carriers will not have access to numbering resources.<sup>240</sup>

## 3. Discussion

85. In order to promote the efficient use of numbering resources, we conclude that it is important for the North American Numbering Plan Administrator and the local number portability administrators to be able to share numbering information. The NANC, however, has not recommended how the North American Numbering Plan Administrator and the local number portability administrators should share numbering information. We acknowledge and applaud the steps already taken by the NANC to coordinate its efforts with those of the Industry Numbering Committee to develop a work plan and guidelines to implement number pooling,<sup>241</sup> and we direct the NANC to continue to work with the Industry Numbering Committee and any other industry bodies it deems appropriate in developing numbering information sharing guidelines. We also direct the NANC to address the needs of CMRS providers to ensure that number conservation efforts do not unfairly discriminate against such carriers.<sup>242</sup> We direct the NANC to make recommendations to the Commission as necessary to develop guidelines for numbering information sharing, consistent with the procedures set forth in ¶ 128, *infra*.

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<sup>236</sup> *Id.*

<sup>237</sup> CTIA Comments at n.11.

<sup>238</sup> *See id.*

<sup>239</sup> *Id.*

<sup>240</sup> *See id.*

<sup>241</sup> *See* Industry Numbering Committee, Status Report on Issue 105 -- Number Pooling (June 10, 1997).

<sup>242</sup> *See* CTIA Comments at n.11.

86. The NANC is currently responsible for selecting both the North American Numbering Plan Administrator to handle area code and central office code number administration and local number portability administrators to handle regional number portability administration.<sup>243</sup> As the Commission pointed out in the *Report & Order*, there are important functional similarities between local number portability administration and the administration of central office codes.<sup>244</sup> Both rely heavily on the use of databases, and both involve administration of North American Numbering Plan resources. Administration of number portability data is like the administration of telephone numbers (as opposed to NXX codes) moving between different carriers. The expertise concerning the functioning of both the North American Numbering Plan Administrator and the local number portability administrators make the NANC well-suited to develop procedures by which the North American Numbering Plan Administrator and the local number portability administrators can share numbering information in order to foster efficient use of numbering resources and effective number portability and central office code administration.

## D. Number Portability and CMRS Providers

### 1. Background

87. The *Working Group Report* states that the work plan executed by the Working Group and related task forces was directed primarily to the wireline portion of the industry and does not fully address wireless concerns.<sup>245</sup> Specifically, the assumptions used in the preparation of the *Architecture Task Force Report* explicitly exclude wireless operations, and the Technical & Operational Task Force did not consider concerns of CMRS providers in depth during the development of Number Portability Administration Center Service Management System requirements.<sup>246</sup> The NANC acknowledges that modifications to the Functional Requirements Specification and the Interoperable Interface Specification may be required to support number portability for CMRS providers. The NANC states that it deferred discussion of potential impacts of number portability on wireless carriers in order to ensure completion of its recommendations for wireline local number portability implementation on a timely basis to permit compliance with the Commission's deployment schedule.<sup>248</sup>

### 2. Positions of the Parties

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<sup>243</sup> See *First Report & Order*, 11 FCC Rcd at 8401, ¶¶ 93-94.

<sup>244</sup> *Id.*

<sup>245</sup> *Working Group Report* at § 3.1.

<sup>246</sup> *Id.*

<sup>247</sup> *Id.*

<sup>248</sup> *Id.* at § 3.2.

88. CTIA generally supports the NANC's recommendations as applied to wireline carriers, but argues that those recommendations must be refined to take into consideration concerns of the wireless industry.<sup>249</sup> CTIA further argues that the Commission should refrain from adopting any assumptions or directives recommended by the NANC that discriminate against the wireless industry.<sup>250</sup> CTIA contends that the NANC's recommendations contain "significant holes" with regard to local number portability implementation from the wireless industry's perspective. CTIA points to the *Architecture Task Force Report* which explicitly indicates that it includes only wireline "assumptions" in its analysis and recommendations.<sup>252</sup> Additionally, the *Technical & Operational Task Force Report* does not address issues that CTIA considers crucial to the wireless industry, such as how the differences between service area boundaries for wireline versus wireless services will be accounted for, and how local number portability will be implemented in a roaming environment.<sup>253</sup> As discussed above, CTIA also contends that the NANC recommendations discriminate against CMRS providers by allowing default routed calls to be blocked.

89. CTIA argues that any work plan for implementing number portability should not be considered complete until the concerns of the wireless industry are addressed, and notes that it and other industry groups are currently addressing technical solutions for implementing number portability in a wireless environment.<sup>255</sup> CTIA asserts that it is "crucial that such solutions be incorporated into the overall [local number portability] work plan before any such plan may be considered complete."<sup>256</sup> CTIA adds that "[a] wireline solution that does not interface with wireless networks will not achieve the Commission's goals of interoperability and nondiscrimination."<sup>257</sup>

### 3. Discussion

90. We recognize the significant time constraints imposed on the NANC for the development of recommended standards and procedures so that wireline carriers can meet the Commission's implementation

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<sup>249</sup> CTIA Comments at 1-2.

<sup>250</sup> *Id.* at 2.

<sup>251</sup> *Id.* (citing *Working Group Report* at § 3.1).

<sup>252</sup> *Id.* (citing *Architecture Task Force Report* at § 7).

<sup>253</sup> *Id.* at 2-3 (citing *Technical & Operational Task Force Report*).

<sup>254</sup> *Id.* at 4-5. See ¶¶ 76-78, *supra*.

<sup>255</sup> CTIA Comments at 3.

<sup>256</sup> *Id.* at 3.

<sup>257</sup> *Id.*

which commences October 1, 1997.<sup>258</sup> We are also aware that under our number portability deployment schedule CMRS providers are not required to have the capability of querying number portability database systems in order to deliver calls from their networks to ported numbers until December 31, 1998<sup>259</sup> and are not required to have the ability to port numbers until June 30, 1999.<sup>260</sup> We, therefore, conclude that it was reasonable for the NANC to make recommendations at this time with respect to the implementation of local number portability by CMRS providers. Our adoption of the NANC's recommendations set forth in its May 1, 1997 transmittal, however, should not be viewed in any way as an indication that we believe our plan for implementing local number portability is complete. The industry, under the auspices of the NANC, will probably need to make modifications to local number portability standards and processes as it gains experience in implementing number portability and obtains additional information about incorporating CMRS providers into a long-term number portability solution and interconnecting CMRS providers with wireline carriers already implementing their number portability obligations.

91. We find that adoption of the current NANC recommendations should not be deferred pending resolution of all wireless concerns. While delaying implementation of number portability until all wireless concerns are fully addressed might result in an easier transition to a number portability environment for CMRS providers, we believe that such delay would be contrary to the public interest because a far greater number of wireline customers could not, during the period of delay, switch local providers without also changing telephone numbers. At the same time, we recognize that it will probably be necessary to modify and update the current local number portability standards and procedures in order to support wireless number portability. Thus, we direct the NANC to develop standards and procedures necessary to provide for CMRS provider participation in local number portability. We further direct the NANC to present its wireless recommendations to the Commission as soon as possible, but no later than nine months after the release of this *Second Report & Order*. CMRS providers will need clear guidelines on how to query the Service Management System databases to determine proper call routing, as well as how to implement wireless number portability. The NANC must also consider other issues of concern to CMRS providers, such as how to account for differences between service area boundaries for wireline versus wireless services and how to implement number portability in a roaming environment. In revising local number portability standards to incorporate the concerns of the wireless industry, the NANC should remain cognizant of the goals of ensuring interoperability of networks and nondiscrimination as applied to CMRS providers.<sup>261</sup> In particular, in making its recommendations, the NANC is to ensure that CMRS providers are not unfairly disadvantaged by virtue of the fact that wireline number portability is being implemented before number portability for CMRS providers.

92. CTIA reports that it and other industry groups are currently developing technical solutions for

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<sup>258</sup> *First Report & Order*, 11 FCC Rcd at 8393, ¶¶ 77-78.

<sup>259</sup> *Id.* at 8439-40, ¶ 165.

<sup>260</sup> *Id.* at 8440, ¶ 166.

<sup>261</sup> *Id.* at 8371, ¶ 37; NANC Charter at ¶ B.

implementing wireless number portability.<sup>262</sup> We direct the NANC to monitor these industry efforts and to recommend to the Commission consistent with the procedures set forth in ¶¶ 128-132, *infra*, for modification to the various technical and operational standards as necessary for CMRS providers to efficiently implement portability and to allow CMRS providers to interconnect with a wireline number portability environment.<sup>263</sup>

## E. Local Number Portability Oversight Procedures

### 1. Background

93. The NANC recommends a multi-tier approach to the oversight and management of the local number portability administrators.

94. Oversight by LLCs. The NANC recommends that the regional LLCs provide initial and ongoing oversight for their respective local number portability administrators.<sup>264</sup> The NANC asserts that the LLCs will conduct their oversight activities in a neutral manner because their members include a variety of carriers (*i.e.* incumbent LECs, competitive LECs, and interexchange carriers), and membership in the LLCs is open to an exchange carrier intending to port numbers in the relevant region, whether or not the carrier is actually certified to provide service in that region.<sup>265</sup> Moreover, the NANC states that LLC meetings are generally open to the public unless proprietary matters are discussed, such as the negotiation of the master contract between the LLC and number portability administrator.<sup>266</sup> Further, the NANC states that each LLC member possesses a single vote on matters and adds that, while most decisions are made by a simple majority vote, some important decisions (e.g., execution of the master contract, and amendment of the LLC operating agreement) must be made unanimous supermajority.<sup>267</sup>

95. In addition, the NANC states that all telecommunications carriers will have nondiscriminatory access to the local number portability administrator's services, regardless of whether the carrier or entity is a member of the LLC.<sup>268</sup> These services will be provided pursuant to user agreements between the local number portability administrator and the carrier.

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<sup>262</sup> CTIA Comments at 3.

<sup>263</sup> See ¶¶ 73-78, *supra*, for a discussion of CMRS provider obligations to query number portability databases.

<sup>264</sup> *Architecture Task Force Report* at §§ 12.2.1, 12.3.1, 12.5.3.

<sup>265</sup> *Working Group Report* at §§ 4.4.1, 4.4.3.

<sup>266</sup> *Id.* at § 4.4.7.

<sup>267</sup> *Id.* at § 4.4.2.

<sup>268</sup> *Id.* at § 4.4.9.

administrator and each entity that utilizes the local number portability administrator's services.<sup>269</sup> As stated in these user agreements are based on the master contract between the local number portability administrator and the LLC and will ensure that such utilizing entities obtain service under the same terms and conditions.<sup>270</sup>

96. Finally, the NANC asserts that the LLCs, according to provisions in their internal operating agreements, must comply with any and all regulatory directives.<sup>271</sup> The NANC claims that such provisions are necessary in order to permit regulators to ensure that the LLCs' management of the local number portability administrators does not inhibit neutral number portability administration.<sup>272</sup> The NANC also points out that it has established a process that provides, in part, for the resolution of disputes by an appropriate regulatory authority although the NANC does not specify a particular regulatory authority or authorities.<sup>273</sup> The NANC contends that this aspect of the LLCs' dispute resolution process will provide further assurance that decisions with competitive implications will be decided in an impartial manner.<sup>274</sup>

97. The NANC states that the general structure and operation of limited liability companies also supports allowing the regional LLCs to oversee the local number portability administrators.<sup>275</sup> The NANC reports that this structure affords its members complete statutory protection from liability, whether in tort, contract or otherwise.<sup>276</sup> All liability is assumed exclusively by the LLC, which protects itself against that liability through insurance coverage.<sup>277</sup> The NANC also submits that limited liability companies are simple organizations that are more easily established

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<sup>269</sup> *Id.* at § 4.4.10.

<sup>270</sup> *Id.*

<sup>271</sup> *Id.* at § 4.4.4.

<sup>272</sup> *Id.*

<sup>273</sup> *Id.* at § 4.4.6. The NANC does not describe any of the LLCs' dispute resolution processes in detail.

<sup>274</sup> *Id.*

<sup>275</sup> *Id.* at §§ 4.6.3, 4.6.1. A limited liability company is a hybrid form of ownership that combines the advantages of a limited partnership and a corporation. Like a limited partnership, profits in an LLC are passed directly through to investors and therefore are taxed only once, which avoids the double taxation of corporations. However, unlike a limited partnership, LLC members may exercise full control without the threat of losing limited liability. *Review of the Commission's Regulations Governing Attribution of Broadcast and Cable/MDS Interests et al.*, Further Notice of Proposed Rulemaking, MM Docket Nos. 94-150, 92-51 & 87-154 (Nov. 7, 1996), Appendix B, part XI. See 61 Fed. Reg. 67255.

<sup>276</sup> *Working Group Report* at §§ 4.6.2.

<sup>277</sup> *Id.*

governed than other organizational forms.<sup>278</sup> For example, the NANC reports that LLCs do not need to observe the same formalities associated with traditional corporate governance.<sup>279</sup> The NANC believes that this simplicity will allow the regional number portability LLCs to make decisions quickly and without the statutory constraints, formalities and time requirements associated with more traditional corporate forms.<sup>280</sup>

98. The NANC also submits that LLC oversight of the local number portability administrators will promote the development of a system of regional databases that are consistent with a national number portability scheme. In particular, the NANC states that oversight of the local number portability administrator by an LLC specific region will facilitate the deployment of number portability on a regional basis because LLC members can port numbers in that BOC region.<sup>281</sup> The NANC also reports that the LLCs required potential database administrators to bid to provide service on a regional basis.<sup>282</sup> At the same time, the NANC asserts that, although regional LLCs are established under various states' laws, they are very similar in their structure and operation, ensuring substantial consistency in the oversight of the local number portability administrators across the country.

99. Oversight by the NANC Generally. In addition to LLC management and oversight, the NANC recommends that it provide general oversight of number portability administration on an ongoing basis.<sup>284</sup> In particular, the NANC recommends that it oversee such administration (1) to ensure that local number portability administrator activities support the Commission objective of impartial operation of the local number portability administrators and (2) to ensure that national uniformity and interoperability in number portability administration is achieved.<sup>285</sup> In addition, the NANC recommends that the Commission make the NANC responsible for recommending approval of all number portability database architecture changes and for resolving any conflicts between service providers regarding number portability architecture.<sup>286</sup> The NANC reports that the LLCs, b

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<sup>278</sup> *Id.* at § 4.6.4.

<sup>279</sup> *Id.*

<sup>280</sup> *Id.*

<sup>281</sup> *Id.* at § 4.5.1.

<sup>282</sup> *Id.*

<sup>283</sup> *Id.* at § 4.5.2.

<sup>284</sup> *Id.* at § 7.1.1.C.

<sup>285</sup> *Id.*

<sup>286</sup> *Architecture Task Force Report* at §§ 12.3.1, 12.3.2.

terms of their respective operating agreements, accept the NANC in this oversight role.<sup>287</sup> The LLCs also, as to the NANC, agree to comply with Commission directives, and the local number portability administrators are obligated to comply with such directives pursuant to the terms of the master contracts.<sup>288</sup> The NANC further recommends that its Local Number Portability Working Group be charged with developing the details of the ongoing general oversight, subject to NANC approval.<sup>289</sup> The NANC also recommends that an open industry group, such as its Technical & Operational Task Force or similar group designated by the NANC, be charged to coordinate and maintain ongoing technical standards for the Number Portability Administration Center Service Management Systems.<sup>290</sup> The NANC's recommendation includes development of a permanent change management process that will provide an open and neutral facility for the submission and consideration of changes requested to the Functional Requirements Specification and the Interoperable Interface Specification.<sup>291</sup>

100. Oversight by Committee Chaired by Chief, Common Carrier Bureau. The NANC also recommends that a committee, comprised of members of the NANC's Local Number Portability Working Group, be created to ensure compliance with the Commission's orders during, at a minimum, local number portability deployment in the top 100 MSAs.<sup>292</sup> The NANC further recommends that this committee be chaired by the Chief of the Common Carrier Bureau, who is responsible for monitoring the progress of number portability implementation. The NANC reasons that this committee would be patterned after the oversight committee that reviewed the implementation of 800 number portability.<sup>294</sup> Moreover, the NANC points out that members of its Local Number Portability Working Group are already experts in number portability implementation.

101. Oversight by State and Federal Regulators. Finally, the NANC recommends that parties not satisfied with a decision by an LLC or local number portability administrator be allowed to bring that decision to the attention of state and federal regulators.<sup>295</sup>

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<sup>287</sup> *Working Group Report* at § 7.1.1.C.

<sup>288</sup> *Id.*

<sup>289</sup> *Id.*

<sup>290</sup> *Working Group Report* at § 7.1.1.D; *see also* ¶ 68, *supra*.

<sup>291</sup> *Working Group Report* at § 7.1.1.D.

<sup>292</sup> *Id.* at § 7.1.1.B.

<sup>293</sup> *Id.*; *First Report & Order*, 11 FCC Rcd at 8393, ¶ 78.

<sup>294</sup> *Working Group Report* at § 7.1.1.B.

<sup>295</sup> *Id.* at §§ 4.4.4 - 4.4.6.

## 2. Positions of the Parties

102. Bell Atlantic and NYNEX jointly urge the Commission to reject the NANC's recommendation that the LLCs oversee and manage the regional local number portability administrators.<sup>296</sup> Bell Atlantic and NYNEX assert that such oversight and control, as proposed, would be inconsistent with the *First Report & Order* and section 251(e)(1) of the Act. In particular, Bell Atlantic and NYNEX contend that the local number portability administrators cannot be impartial, as the Commission has required, if they are managed by LLCs that are controlled by competitive LECs.<sup>297</sup> For example, Bell Atlantic and NYNEX argue that the Mid-Atlantic Carrier Acquisition Company (Mid-Atlantic LLC) has interfered with Bell Atlantic's efforts to work with that region's local number portability administrator and otherwise fulfill its number portability obligations. Bell Atlantic and NYNEX claim that the Mid-Atlantic LLC (1) excluded Bell Atlantic from the contract discussions between the LLC and Lockheed Martin and (2) initially prohibited Lockheed Martin from discussing test arrangements and contract terms with Bell Atlantic, thereby delaying Bell Atlantic's receipt of technical information it claims it needs.<sup>298</sup> Bell Atlantic and NYNEX claim that the Mid-Atlantic local number portability administrator has required Bell Atlantic to sign a user agreement before Bell Atlantic could begin testing with the local number portability administrator and that testing must begin by mid-June, 1997, but the LLC has refused to provide a draft of the user agreement.<sup>299</sup>

103. Bell Atlantic and NYNEX submit that general federal and state regulatory oversight will not solve the problems associated with the LLCs' oversight of the local number portability administrators because "[i]f [regulatory] oversight were sufficient to ensure neutrality (and the appearance of neutrality), there would have been no need for the Commission to put any constraints on who could be a [local number portability administrator]."<sup>300</sup> As a result, they recommend that the Commission: (1) adopt specific rules to govern the operation of the local number portability administrators; (2) delegate oversight of the local number portability administrators to an industry or standard-setting organization that operates by consensus -- a function that Bell Atlantic and NYNEX claim the NANC could not perform -- or (3) as a federal advisory committee, [the NANC] may only provide advice to a federal government department or agency"; and/or (3) ensure that local number portability administrators act impartially by requiring them to provide services under tariff, as the Commission did with respect to 800 number service.<sup>301</sup>

104. USTA contends that the NANC's recommendations do not contain adequate safeguards to ens

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<sup>296</sup> Bell Atlantic/NYNEX Comments at 1-2.

<sup>297</sup> *Id.*

<sup>298</sup> *Id.* at 4-5.

<sup>299</sup> *Id.* at 5.

<sup>300</sup> *Id.*

<sup>301</sup> *Id.* at 6-7.

"competitive neutrality" in the LLCs' administration of the regional databases.<sup>302</sup> In particular, USTA contends that the LLCs' open membership, one-vote-per-member, dispute resolution and supermajority voting policies may suffice to enable the LLCs to resolve efficiently and evenhandedly disputes among different factions of carriers (incumbent vs. competitive LECs, large vs. small LECs, LLC members vs. nonmembers).<sup>303</sup> USTA recommends that the Commission take steps to guarantee that all carriers are treated fairly.<sup>304</sup> Specifically, USTA urges the Commission to develop guidelines for number portability administration that ensure procedural and substantive fairness, including (at a minimum) procedures for allowing carriers to appeal actions of the LLC or local number portability administrators to the Commission.<sup>305</sup>

105. CTIA also argues that certain aspects of the NANC's recommendations would limit the participation of CMRS providers in the administration of local number portability. Specifically, CTIA argues that LLC membership should not be limited to "any new entrant into the business of local exchange service," as the NANC recommends,<sup>306</sup> because it would preclude the wireless industry from participation, as "wireless local loop" is not yet a reality.<sup>307</sup> CTIA also argues that CMRS membership in the LLCs should not be limited to carriers that "intend to or are porting numbers," as the NANC recommends,<sup>308</sup> because many CMRS providers may not intend to port numbers for "quite some time" given that CTIA predicts small demand for ported wireless numbers and CMRS providers need only deploy number portability in the 100 largest MSAs in which they have received request at least nine months before the deadline of June 30, 1999.<sup>309</sup> CTIA submits that these LLC membership requirements would limit CMRS participation in the administration of number portability, even though CMRS providers will be impacted by such administration, as CMRS providers must complete calls to ported wireless subscribers either by establishing business arrangements with a LEC or by performing their own queries.<sup>310</sup> CTIA recommends that all CMRS providers be allowed to participate in the LLCs regardless of whether they

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<sup>302</sup> USTA Comments at 3.

<sup>303</sup> *Id.*

<sup>304</sup> *Id.*

<sup>305</sup> *Id.* at 3-4.

<sup>306</sup> *Working Group Report* at § 4.4.1.

<sup>307</sup> CTIA Comments at 6.

<sup>308</sup> *Working Group Report* at § 4.4.3.

<sup>309</sup> CTIA Comments at 7.

<sup>310</sup> *Id.* at 7-8.

port numbers.<sup>311</sup>

106. WorldCom supports the NANC's recommendations concerning LLC management of the local number portability administrators.<sup>312</sup> At the same time, WorldCom requests that the Commission expressly require that all carriers be able to obtain the same terms and conditions in contracting with the local number portability administrators and that all carriers be prohibited from using number portability deployment to gain a competitive advantage over other carriers.<sup>313</sup> Several parties also support adoption of the NANC's recommendations in their entirety or with amendments or modifications that do not concern LLC management of the local number portability administrators.<sup>314</sup>

107. In joint reply comments, Bell Atlantic and NYNEX criticize WorldCom for supporting the NANC's recommendation that only LLC members be allowed to participate in negotiations with local number portability administrators regarding the master contracts, which would serve as the basis of individual user agreements with LLC members and non-members alike.<sup>315</sup> Bell Atlantic and NYNEX contend that excluding non-members from negotiation of the master contract would enable LLC members to set the prices for local number portability administrator services sold to non-members, which Bell Atlantic and NYNEX claim would allow LLC members to serve as "unappointed regulators."<sup>316</sup>

108. GTE states on reply that it shares USTA's concern that LLC voting rules may jeopardize the LLC's ability to perform in an independent and impartial manner in all matters.<sup>317</sup> GTE urges the Commission to grant parties aggrieved by any decision of an LLC immediate recourse to the Commission or some other entity having appropriate jurisdiction.<sup>318</sup> GTE commends the efforts of the LLCs and notes that it is an active member of 17 of the seven LLCs.<sup>319</sup> Nevertheless, GTE asserts that competitive LECs, which comprise a majority of LLC members

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<sup>311</sup> *Id.*

<sup>312</sup> WorldCom Comments at 4-5.

<sup>313</sup> *Id.* at 4.

<sup>314</sup> *See, e.g.*, AT&T Comments at 1; ALTS Comments at 1; GSA Comments at 4.

<sup>315</sup> Bell Atlantic/NYNEX Reply Comments at 2.

<sup>316</sup> *Id.*

<sup>317</sup> GTE Reply Comments at 1.

<sup>318</sup> *Id.*

<sup>319</sup> *Id.* at 1-2.

vote in a manner that favors competitive LECs as opposed to incumbents.<sup>320</sup> GTE is concerned primarily about possible LLC decisions not achieved through consensus that implicate or require an interpretation of Commission policies, rather than decisions regarding internal LLC operating issues.<sup>321</sup> GTE also notes that at least one of the operating agreements requires that any disputes resulting from a LLC decision must be subjected to arbitration (which no written decision is required) before the LLC decision can be taken to the Commission for review.<sup>322</sup> GTE's view that such arbitration provisions will make it difficult for parties aggrieved by a LLC decision to obtain relief. In addition, GTE urges the Commission to require that the LLCs file with the Commission their final master agreements with their respective local number portability administrators to ensure that end users in all regions are treated uniformly by the local number portability administrators, especially with respect to rates for local number portability administrator services.<sup>323</sup> Finally, if the Commission does not adopt the proposal of Bell Atlantic NYNEX that local number portability administrators tariff their services, GTE recommends that the Commission require, at a minimum, that the local number portability administrators periodically file price lists for all of their services.<sup>324</sup>

109. BellSouth states on reply that it agrees with USTA that the Commission must take steps to guarantee that all carriers will be treated equally by the local number portability administrators.<sup>325</sup> Like GTE, BellSouth commends the activities of the NANC and the LLCs to date, adding that the Southeast LLC to which BellSouth belongs "is currently functioning in a problem-free manner with no known instances of discriminatory conduct."<sup>326</sup> Nevertheless, like Bell Atlantic and NYNEX, BellSouth asserts that continued oversight of the local number portability administrators by the LLCs does not comport with the Commission's requirement that the local number portability administrators not be aligned with any industry segment, as the LLCs include only wireline carriers and are composed primarily of competitive LECs.<sup>327</sup> BellSouth states that it is premature to establish

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<sup>320</sup> *Id.* at 2.

<sup>321</sup> *Id.* at 2, 3 n.2.

<sup>322</sup> *Id.* at 2.

<sup>323</sup> *Id.* at 3-4.

<sup>324</sup> *Id.* at 4.

<sup>325</sup> BellSouth Reply Comments at 1.

<sup>326</sup> *Id.* at 1-2; *see also id.* at 3 ("As with NYNEX, however, BellSouth has not experienced the kinds of issues that Bell Atlantic has experienced in connection with the actual governance of the LLC."); *id.* (noting BellSouth's "positive experiences" with the Southeast LLC and the Southeast LLC and at 5 ("BellSouth believes that there were compelling reasons to create regional LLCs in order to implement the Commission's requirements even as the Commission went about creating NANC. These LLCs have served, and will continue to serve (at least for the period), important functions with respect to implementing [local number portability].").

<sup>327</sup> *Id.* at 2-3.

term role for LLCs, as presently constituted, in the administration of number portability.<sup>328</sup>

110. While BellSouth claims that any of the three proposals set forth by Bell Atlantic and NYNEX would solve the problem of potential LLC partiality, BellSouth recommends that the Commission delegate a portion of the regional local number portability administrators to an industry or standards body, such as the Alliance for Telecommunications Industry Solutions (ATIS), that operates by consensus under the rules of the American Standards Institute (ANSI).<sup>329</sup> In support of this solution, BellSouth states that it agrees with Bell Atlantic and NYNEX that the NANC cannot oversee the local number portability administrators "because, as a federal advisory committee, [NANC's] charter limits its powers to providing advice to a federal government department or agency and because NANC membership is not open to all industry parties."<sup>330</sup>

111. BellSouth proposes, in the alternative, that the Commission delegate local number portability administrator oversight to a national LLC, with membership open to all industry segments. Under either alternative, BellSouth adds, the LLCs would continue to work with local number portability administrators to implement number portability, but oversight of the local number portability administrators would be delegated to a forum such as a national LLC.<sup>331</sup>

112. On reply, WorldCom disputes claims by Bell Atlantic and NYNEX that the Mid-Atlantic LLC interfered with Bell Atlantic's efforts to work with Lockheed Martin.<sup>332</sup> WorldCom, which notes that Bell Atlantic is the only BOC that has refused to join the LLC for its region, claims that Bell Atlantic has attempted to negotiate an end user agreement with Lockheed Martin on terms that are more favorable than those available to other carriers. WorldCom states that the Mid-Atlantic LLC has not prevented Bell Atlantic from obtaining information necessary for number portability implementation.<sup>334</sup> WorldCom also points out that Bell Atlantic does not suggest that the carriers have failed to be impartial in selecting local number portability administrators or in handling a variety of technical and operational issues.<sup>335</sup> Moreover, WorldCom states that, at Bell Atlantic's request, Lockheed Martin provided

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<sup>328</sup> *Id.* at 5.

<sup>329</sup> *Id.* at 3-4.

<sup>330</sup> *Id.* at 4.

<sup>331</sup> *Id.* at 5.

<sup>332</sup> WorldCom Reply Comments at 2-3.

<sup>333</sup> WorldCom Reply Comments at 3. *See also* AT&T Reply Comments at 2.

<sup>334</sup> WorldCom Reply Comments at 3.

<sup>335</sup> *Id.* at 7. *See also* AT&T Reply Comments at 3.

Atlantic with confidential and proprietary technical information concerning number portability implementation. WorldCom also submits that the Mid-Atlantic LLC acted properly in denying Bell Atlantic's requests to observe master contract negotiations between the LLC and Lockheed Martin and to obtain draft user agreements because, like any other normal business contract negotiations, the negotiations between the LLC and Lockheed Martin are confidential.<sup>337</sup> Finally, WorldCom urges the Commission to reject the proposals of Bell Atlantic and NYNEX regarding the oversight and management of local number portability administrators by the LLCs, arguing that (1) adequate protections to ensure the impartiality of the LLCs with respect to the local number portability administrators are already in place; (2) Bell Atlantic has failed to demonstrate a compelling need for its proposed safeguard; (3) NANC has devoted considerable effort to develop standards through industry-wide consensus; and (4) Lockheed Martin should not be required to file tariffs because it is not a common carrier.<sup>338</sup>

113. AT&T notes on reply that Bell Atlantic makes no specific proposals for additional requirements to ensure local number portability administrator impartiality.<sup>339</sup> AT&T also asserts that it is inconsistent for Bell Atlantic to demand local number portability administrator oversight by a decision-making body that operates by consensus while at the same time commending the NANC, which does not operate by consensus, for its efforts.<sup>340</sup> Further, AT&T claims that the LLCs were created, in large part, to serve as a neutral party to negotiate terms and conditions with the local number portability administrator that would apply equally to all carriers using the local number portability administrator.<sup>341</sup> Finally, AT&T argues that the request of Bell Atlantic and NYNEX that the local number portability administrators be required to tariff their services is hypocritical in light of Bell Atlantic's efforts to enter into a preferential contract with the Mid-Atlantic LLC.<sup>342</sup>

### 3. Discussion

114. We adopt, with certain modifications, the NANC's recommendations regarding the oversight and management of the local number portability administrators. Specifically, we adopt, on an interim basis, the recommendation that the LLCs provide immediate oversight and management of the local number portability administrators. The LLCs should serve in this role until the Commission concludes a rulemaking to examine

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<sup>336</sup> WorldCom Reply Comments at 3.

<sup>337</sup> *Id.* at 4.

<sup>338</sup> WorldCom Reply Comments at 6-8. *See also* AT&T Reply Comments at 4; Sprint Comments at 2-3.

<sup>339</sup> AT&T Reply Comments at 4. *See also* Sprint Reply Comments at 4.

<sup>340</sup> AT&T Reply Comments at 5.

<sup>341</sup> *Id.* at 5-6.

<sup>342</sup> *Id.* at 6-7.

of local number portability administrator oversight and management including, but not limited to, the question whether the LLCs should continue to act in this capacity. The Commission will initiate such a rulemaking no later than June 30, 1998. In addition, we adopt the NANC's recommendation that it provide ongoing general oversight of local number portability administration, including oversight of the individual LLCs, subject to Commission review. We also adopt the NANC's recommendation that the Commission create a committee, chaired by the Chief of the Common Carrier Bureau, to oversee number portability deployment in the top 100 MSAs.

115. Oversight by the LLCs. We conclude that, at least in the short term, the LLCs should provide immediate oversight for the regional local number portability administrators. Specifically, we conclude that there are three advantages to allowing LLCs to provide immediate oversight of the local number portability administrators: (1) we have no basis for concluding that the LLCs will not treat all carriers fairly; and (2) the record regarding local number portability administrator oversight does not permit us to conclude that other proposals would be preferred to LLC oversight.

116. We agree with the NANC that there will likely be a need to modify some requirements to permit database system enhancements and other modifications as local number portability is deployed throughout each region.<sup>343</sup> Without a single entity to oversee such modifications in each region, local number portability administrators would likely be faced with varied, if not conflicting, proposals from the carriers utilizing the database regarding how the modifications should be implemented. The need for the local number portability administrators to reconcile such varied proposals, in turn, could potentially delay the administrator from making necessary database modifications.

117. We conclude that the LLCs are the entities that are best able to provide immediate oversight of the local number portability administrators at this time. Because the LLCs were responsible for negotiating the database contracts with their respective local number portability administrators, each LLC is the entity with the greatest expertise regarding the structure and operation of the database for its region. Therefore, with respect to each region, using an entity other than the LLC to provide immediate oversight of the local number portability administrators would waste the LLC's valuable expertise and run the risk that necessary modifications to the database system may be delayed.

118. Bell Atlantic and other parties object to LLC oversight and management of the local number portability administrators based primarily on the fact that, because new entrants will outnumber incumbent LECs in each region, the new entrants that belong to the individual LLCs will be able to outvote the incumbent LECs if they so choose. They suggest that, with respect to decisions that do not require unanimity by the LLCs, any one member of an LLC could vote in ways that give new entrants competitive advantages over incumbent LECs in the provision of number portability.

119. Any decision making process that operates on the basis of majority votes runs the risk that the

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<sup>343</sup> See *Working Group Report* at § 7.1.1.D.

group will decide to take action that disadvantages some members. Requiring unanimity for all oversight decisions, however, could make such oversight a cumbersome, time-consuming process. In light of the concerns expressed by incumbent LECs, we adopt the NANC's recommendation that LLCs provide immediate oversight of the local number portability administrators, but such oversight shall be on an interim basis. Specifically, the LLCs may serve in this role only until such time as the Commission concludes further proceedings to examine the issue of local number portability administrator oversight and management in general and, in particular, the question of whether the LLCs should continue to act in this capacity. The Commission will initiate such further proceedings no later than June 30, 1998.<sup>344</sup> We note that Phase I of the Commission's long-term number portability implementation schedule was completed March 31, 1998.<sup>345</sup> We believe, therefore, that initiating a proceeding no later than June 30, 1998 will enable the parties and the Commission to acquire practical experience with number portability implementation and to determine whether problems arise as a result of oversight and management envisioned by LLCs.

120. We will permit LLC oversight, on an interim basis, for several reasons. First, the current record does not support a finding that the LLCs will act in a fashion that is not fair to all carriers. To the contrary, incumbent LECs applaud the LLCs' efforts to date, and BellSouth states affirmatively that the LLCs have remained neutral during the administrator selection and contracting phases of number portability deployment.<sup>346</sup> None of the commenting parties offers any specific instances of procedural irregularities by any of the LLCs, with the exception of Bell Atlantic's criticisms regarding the activities of the Mid-Atlantic LLC, which other parties dispute.<sup>347</sup> We note that the Maryland Public Service Commission, in an order regarding the conflict between Bell Atlantic and the Mid-Atlantic LLC, required Bell Atlantic to sign a non-disclosure form before it could review the LLC's standard user agreement with Lockheed Martin.<sup>348</sup> The Maryland Commission also directed the regulated members of the Mid-Atlantic LLC to secure a release from Lockheed and to furnish a copy of the proposed standard user agreement to Bell Atlantic.<sup>349</sup> Further, the Maryland Commission directed the Mid-Atlantic LLC and Bell Atlantic to negotiate

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<sup>344</sup> A future rulemaking regarding oversight of the local number portability administrators will permit the Commission to do other things, Bell Atlantic's claim that it may not be efficient to perpetuate seven separate LLCs for the purpose of overseeing the administrators. Bell Atlantic/NYNEX Comments at 2.

<sup>345</sup> *First Order on Reconsideration* at ¶ 78.

<sup>346</sup> *See* GTE Reply Comments at 1-2; BellSouth Reply Comments at 1-2.

<sup>347</sup> Bell Atlantic/NYNEX Comments at 4-5. *See, e.g.*, Letter from Frank Simone, Government Affairs Director, AT&T, to William Caton, Acting Secretary, FCC, CC Docket No. 95-116 at 1-2 (filed July 12, 1997) (AT&T July 12, 1997 *Ex Parte* Filing); Work Comments at 3-4.

<sup>348</sup> *See* Letter from Marie Breslin, Director Government Relations, Bell Atlantic, to William Caton, Acting Secretary, FCC, CC Docket No. 95-116, Attachment at 6-7 (filed June 27, 1997) (Bell Atlantic June 27, 1997 *Ex Parte* Filing) (attaching a June 24, 1997, Order of the Maryland Public Service Commission).

<sup>349</sup> *See id.*, Attachment at 7. The Maryland Commission noted that the Mid-Atlantic LLC had offered to provide Bell Atlantic with the draft standard user agreement prior to being required to do so. *Id.*, Attachment at 6.

resolve any areas of disagreement regarding the user agreement.<sup>350</sup> If the parties cannot resolve their differences regarding the user agreement, the Maryland Commission has said that it will resolve these differences for the carrier. Because the record contains no other specific allegations of anticompetitive activities by the LLCs, we are not persuaded on the basis of the current record that partiality by LLCs is likely to occur in the immediate future.

121. Second, we agree with WorldCom, Sprint and AT&T that there are significant protections to ensure fair and impartial actions by the LLCs. As the NANC states, membership in the LLCs is open to any local carrier that intends to port numbers, LLC meetings are generally open to the public, and members of the LLCs have agreed to require a supermajority or unanimity with respect to voting on certain important decisions, such as execution of the master contract.<sup>352</sup> Further, the NANC explains that all carriers that need to access the data for rating, routing, or billing purposes will have the same access to the local number portability administrator's system even if the carrier is not a member of the LLC.<sup>353</sup> We also observe that the LLCs have agreed to follow any directives from state and federal regulators.<sup>354</sup> In addition, we note that oversight by the NANC and by state and federal regulators provides additional protection against the possibility of partiality by the LLCs in their oversight of the local number portability administrators.<sup>355</sup>

122. Third, we reject the arguments of Bell Atlantic and NYNEX and others that permitting the LLCs to oversee the number portability database administrators would be inconsistent with the *First Report & Order* because the LLCs are not, in their view, neutral.<sup>356</sup> In the *First Report & Order*, we specified that the local number portability administrators must be "independent, non-governmental entities that are not aligned with any particular telecommunications industry segment."<sup>357</sup> Contrary to the arguments of Bell Atlantic and NYNEX, the neutrality requirement applies to number portability database administrators, not to entities that oversee the administrators. In any event, because we find that there is no basis in the current record for us to conclude that the LLCs will act in a fashion that is not fair to all carriers, we also cannot conclude that the LLCs' interim oversight and management of the number portability administrators will prevent the administrators from acting impartially.

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<sup>350</sup> See *id.*, Attachment at 8.

<sup>351</sup> See *id.*

<sup>352</sup> *Working Group Report* at §§ 4.4.1 - 4.4.3. We note, however, that the LLC members may amend or modify these requirements.

<sup>353</sup> *Id.* at § 4.4.9.

<sup>354</sup> *Id.* at § 4.4.4.

<sup>355</sup> See ¶¶ 130, 131, *infra*.

<sup>356</sup> See, e.g., BellSouth Reply Comments at 2-3.

<sup>357</sup> *First Report & Order*, 11 FCC Rcd at 8400-01, ¶¶ 92-93. As stated above, we conclude that the local number portability administrators recommended by the NANC and approved in this order -- namely, Lockheed Martin and Perot Systems -- are neutral.

123. We wish to underscore, however, that we remain committed to ensuring that number portability administration is carried out in an impartial manner. In the *First Report & Order*, we delegated authority to Chief of the Common Carrier Bureau to monitor the progress of number portability implementation for wire carriers and to take appropriate action to ensure compliance with the implementation schedule.<sup>358</sup> We express our intent to delegate authority to the Chief of the Common Carrier Bureau to monitor the activities of the carriers that control the LLCs and to take any action necessary to remedy possible partiality by those carriers with respect to the oversight and management of the local number portability administrators.

124. We also decline, at this time, to grant Bell Atlantic and NYNEX's request that local number portability administrators be required to provide number portability services under tariff as a means of avoiding competitive abuses by new entrants through the LLCs.<sup>359</sup> Bell Atlantic argues that because the Commission designated the administrator of the 800 number database to provide access to its database under tariff, the Commission should do the same with respect to local number portability databases. We find that Bell Atlantic's reliance on our decision in the 800 number database context is misplaced.<sup>360</sup> In that decision, we found that "[o]n balance . . . the better course . . . for now" was to require that access to the 800 database be tariffed because we determined that such treatment was necessary to ensure that 800 database access was provided at reasonable rates and on nondiscriminatory terms. We do not find the same concerns applicable to access to local number portability databases. First, section 251(c)(2) requires that the cost of number portability "shall be borne by all telecommunications carriers on a competitively neutral basis as determined by the Commission."<sup>362</sup> Thus, the method for calculating the amount any particular carrier will pay for obtaining services from a local number portability database administrator will be determined by the Commission, not by the LLC. Second, as noted above, the local number portability administrators, pursuant to their master contracts negotiated by the LLC, will offer access to their databases to all carriers on the same terms and conditions, whether or not the carrier is a member of an LLC.

125. In addition, we cannot conclude from the current record that, as a practical matter, CMRS providers will be excluded from participating in the LLCs' management and oversight activities as they affect CMRS providers. As stated above, in order to complete the tasks associated with wireline number portability in accordance with the Commission's schedule, the NANC directed its attention to developing recommendations primarily relating to the wireline portion of the industry and did not fully address wireless concerns.<sup>363</sup> Further, the NANC recognizes

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<sup>358</sup> *First Report & Order*, 11 FCC Rcd at 8393, ¶ 78.

<sup>359</sup> *See* Bell Atlantic/NYNEX Comments at 6-7.

<sup>360</sup> *See Provision of Access for 800 Service*, 8 FCC Rcd 1423 (1993).

<sup>361</sup> *Id.* at 1426, ¶ 29.

<sup>362</sup> 47 U.S.C. § 251(e)(2).

<sup>363</sup> *See* ¶ 87, *supra*.

certain requirements, such as the FRS and IIS, must be revised to incorporate the work of CTIA and others on technical aspects of the provision of number portability by CMRS providers.<sup>364</sup> We share CTIA's concern that number portability be administered in an impartial manner, and we strongly encourage both the NANC and the Commission to review their policies to ensure that they have not, even inadvertently, limited the participation of CMRS providers in the LLCs or other aspects of number portability administration. While there is no evidence in the record that a CMRS provider has been denied membership in an LLC, we encourage the LLCs to make membership available to all carriers that intend to port numbers, whether those carriers intend to do so immediately or sometime in the future. We do not believe, however, that CTIA's arguments justify rejection or modification of the NANC's recommendations at this time.

126. Other proposals for local number portability administrator oversight suggested by incumbents include: (1) adopting specific rules to govern the operation of the local number portability administrators; (2) delegating oversight of the local number portability administrators to an industry or standards body that operates by consensus; (3) requiring local number portability administrators to file their master agreements with the Commission; and (4) delegating local number portability administrator oversight to a national LLC.<sup>365</sup> As a general matter, the fact that these proposals offer little more than bare assertions that these alternatives would be preferable to LLC oversight, without explanation or justification for their conclusions. We find that the current record does not support a finding that any of these proposals would be preferable to LLC oversight. Consequently, we lack sufficient information regarding these proposals to make a reasoned decision regarding their adoption.

127. The LLCs are currently requiring that database administrators provide uniform terms and conditions to all carriers. WorldCom asks that the Commission expressly endorse the LLCs' requirement that number portability database administrators provide same terms and conditions to all carriers that must provide number portability in a region, regardless of whether a particular carrier belongs to the LLC.<sup>366</sup> We agree with WorldCom that no carrier should be able to use the terms and conditions of obtaining number portability database services to gain a competitive advantage over other carriers. In the *First Report & Order*, we determined that it is in the public interest for the number portability databases to be administered by one or more neutral third parties because neutral third party administration "ensures the equal treatment of all carriers and avoids any appearance of impropriety or anti-competitive conduct." Thus, our order expressed an expectation that a neutral administrator would ensure equal treatment of all carriers. We did not affirmatively require uniform treatment. Based on the information presently available, the LLC requirement for uniform terms and conditions appears to be reasonable. Nevertheless, given the limited record, we do not conduct further consideration of this issue if any party can demonstrate that the LLCs' requirement that database administrators provide uniform terms and conditions to all carriers is unfair to them.

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<sup>364</sup> Working Group Report at § 3.1.

<sup>365</sup> Bell Atlantic/NYNEX Comments at 6-7; GTE Reply Comments at 3-4; BellSouth Reply Comments at 5.

<sup>366</sup> WorldCom Comments at 4.

<sup>367</sup> *First Report & Order*, 11 FCC Rcd at 8400, ¶ 92.

128. Oversight by the NANC Generally. We adopt the NANC's recommendation that it provide general oversight of number portability administration on an ongoing basis. Specifically, we establish a procedure whereby parties may bring matters regarding number portability administration to the NANC so that it may recommend resolution of those matters to the Commission.

129. The NANC represents a broad cross section of carriers with interests in numbering and number portability issues and has developed substantial expertise while formulating its recommendations regarding number portability implementation. Application of this expertise will be critical in addressing future issues regarding number portability deployment, including implementation of number portability by CMRS providers and coordination of number portability administration with numbering administration. Further, we find that the NANC provides a valuable forum in which carriers are able to consider, at the national level, possible ways to resolve issues that arise when number portability is deployed within each number portability region. Such issues include, but are not limited to, ensuring that the local number portability administrators operate impartially, and achieving national uniformity and interoperability in number portability administration. In our view, such ongoing work of the NANC, especially during the early phases of deployment, will provide invaluable assistance to the Commission in ensuring timely implementation of number portability. Although the Commission retains ultimate authority over number portability matters, carriers that are not satisfied with a decision of an LLC or local number portability administrator regarding the administration of number portability, and cannot obtain relief from either of those entities, may bring their concerns before the NANC.

130. The Commission strongly encourages all parties to attempt to resolve issues regarding number portability deployment among themselves and, if necessary, under the auspices of the NANC. If any party objects to the NANC's proposed resolution, the NANC shall submit its proposed resolution of the disputed issue to the Commission as a recommendation for Commission review. In light of the parties' record of successful cooperation in implementing number portability, we believe that this approach will enable the parties to resolve such issues more efficiently and effectively. Such issues may include, but are not limited to, amendments to or interpretations of the NANC's recommendations approved in this order, disputes regarding the LLCs' oversight and management of the number portability database administrators, or any other matter involving the administration of local number portability. In the interest of expediting this process, the Commission hereby establishes the following procedures to govern NANC recommendations submitted for Commission review:

- (1) Following the adoption of a recommendation regarding the administration of number portability, the NANC shall issue a written report summarizing the positions of the parties and the basis for the recommendation adopted by the NANC. The NANC Chair will transmit the written report of such recommendation to the Chief of the Common Carrier Bureau (Chief). The Chief will issue a public notice describing the report and provide a reasonable opportunity for interested parties to comment on the NANC's recommendation. Recommendations adopted by the NANC and forwarded to the Commission may be implemented by the parties pending Commission review.
- (2) Within 90 days of the conclusion of the comment cycle established by the Chief of the

Common Carrier Bureau for review of a NANC recommendation, the Chief, after consultation with the Chief of the Wireless Telecommunications Bureau, may issue an order adopting, modifying or rejecting the recommendation. If the Chief does not act within 90 days of the conclusion of the comment cycle, the recommendation will be deemed to have been adopted by the Bureau.

131. We reject USTA's request that we establish direct appeal provisions for carriers that wish to challenge the decisions of the LLCs or the local number portability administrators regarding the administration of number portability. As stated above, most of the commenting parties agree that the LLCs and local number portability administrators have worked efficiently and fairly to implement local number portability, and none of the commenting parties identifies with precision any future circumstances in which the LLCs and local number portability administrators would fail to work efficiently and fairly. Moreover, by this order, the Commission establishes a procedure through which aggrieved parties may have their concerns addressed in the LLCs' own dispute resolution process, by the NANC, and ultimately by the Commission. Given the success of carriers and the local number portability administrators in resolving difficult implementation issues, as well as the availability of the NANC's dispute resolution process, we decline to establish special provisions for bringing such matters before state or federal regulators.

132. Implementation Oversight Committee. We also adopt the NANC's recommendation that the Commission create a committee to monitor number portability deployment in the top 100 MSAs. We agree with the NANC that such monitoring will be especially important during the initial phase of number portability deployment. This initial phase will involve more extensive testing and will lay the groundwork for successful deployment in subsequent phases.<sup>368</sup> Consequently, we are creating a committee, comprised of members of the NANC's Local Number Portability Working Group, representing a broad cross-section of the telecommunications industry, and chaired by the Chief of the Common Carrier Bureau, to monitor compliance with the Commission's orders during deployment of number portability in the top 100 MSAs. This committee will not provide advice or recommendations to the Commission, but will gather information to monitor number portability deployment in the top 100 MSAs.

#### IV. ORDERING CLAUSES

133. Accordingly, IT IS ORDERED that, pursuant to the authority contained in sections 1, 4(i), 4(j), 201-205, 218, 251, and 332 of the Communications Act as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 201-205, 218, 251 and 332, Part 52 of the Commission's Rules, 47 C.F.R. § 52, is AMENDED as set forth in Appendix B 1

134. IT IS FURTHER ORDERED that the policies, rules and requirements set forth in this *Second Report and Order* ARE ADOPTED, effective 30 days after publication of a summary of this Order in the Federal Register.

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<sup>368</sup> *First Order on Reconsideration* at ¶ 78.

135. IT IS FURTHER ORDERED that the Secretary shall send a copy of this SECOND REPORT ORDER, including the final regulatory flexibility certification set forth in Appendix C, to the Chief Counsel Advocacy of the Small Business Administration, in accordance with paragraph 605(b) of the Regulatory Flexibility Act, 5 U.S.C. §§ 601 *et. seq.*

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton  
Acting Secretary

**APPENDIX A - LIST OF PARTIES**

**Comments (filed 6/2/97):**

Association for Local Telecommunications Services (ALTS)  
AT&T Corp. (AT&T)  
Bell Atlantic and NYNEX  
Cincinnati Bell Telephone Company (Cincinnati Bell)  
Cellular Telecommunications Industry Association (CTIA)  
General Services Administration (GSA)  
United States Telephone Association (USTA)  
WorldCom, Inc. (WorldCom)

**Reply Comments (filed 6/17/97):**

AT&T  
BellSouth Corporation (BellSouth)  
Bell Atlantic and NYNEX  
GTE Service Corporation (GTE)  
Sprint Corporation (Sprint)  
WorldCom

**APPENDIX B - FINAL RULES****AMENDMENTS TO THE CODE OF FEDERAL REGULATIONS****PART 52 -- NUMBERING**

Part 52 of Title 47 of the Code of Federal Regulations (C.F.R.) is amended as follows:

1. A new Section 52.26 is added to read as follows:

**§ 52.26 NANC Recommendations on Local Number Portability Administration.**

(a) Local number portability administration shall comply with the recommendations of the NANC as set forth in the report to the Commission prepared by the NANC's Local Number Portability Administration Selection Working Group, dated April 25, 1997 (*Working Group Report*), and its appendices, which are incorporated by reference pursuant to 5 U.S.C. § 552(a), except as follows:

(1) The regional limited liability companies (LLCs), already established by telecommunications carriers in each of the original Bell Operating Company regions, shall manage and oversee the number portability administrators, subject to review by the NANC, but only on an interim basis until the conclusion of a rulemaking to examine the issue of local number portability administration oversight and management and the question of whether the LLCs should continue to act in this capacity;

(2) The NANC shall provide ongoing oversight of number portability administration, including oversight of the regional LLCs, subject to Commission review. Parties shall attempt to resolve issues regarding number portability deployment among themselves and, if necessary, under the auspices of the NANC. If any party objects to the NANC's proposed resolution, the NANC shall issue a written report summarizing the positions of the parties and the basis for the recommendation adopted by the NANC. The NANC Chair shall submit its proposed resolution of the disputed issue to the Chief of the Common Carrier Bureau as a recommendation for Commission review. The Chief of the Common Carrier Bureau will place the NANC's proposed resolution on public notice. Recommendations adopted by the NANC and forwarded to the Bureau may be implemented by the parties pending review of the recommendation. Within 90 days of the conclusion of the comment cycle, the Chief of the Common Carrier Bureau may issue an order adopting, modifying or rejecting the recommendation. If the Chief does not act within 90 days of the conclusion of the comment cycle, the recommendation will be deemed to have been adopted by the Bureau; and

(3) If a telecommunications carrier transmits a telephone call to a local exchange carrier's switch that contains any ported numbers, and the telecommunications carrier has failed to perform a

database query to determine if the telephone number has been ported to another local exchange carrier, the local exchange carrier may block the unqueried call only if performing the database query is likely to impair network reliability.

(b) Copies of the *Working Group Report* and its appendices can be obtained from the Commission's contract copier and can be inspected during normal business hours at the following location: 1919 M Street, N.W., Room 239 (FCC Reference Center), Washington, D.C. 20554. The *Working Group Report* and its appendices documents are also available on the Internet at <http://www.fcc.gov/ccb/Nar>

**APPENDIX C -- REGULATORY FLEXIBILITY ANALYSIS**

1. As required by the Regulatory Flexibility Act (RFA),<sup>1</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Notice of Proposed Rulemaking* in this docket (*Notice*).<sup>2</sup> The Commission sought written public comment on the proposals in the *Notice*, including comment on the IRFA. The comments received on the IRFA were discussed in the *First Report & Order's* Final Regulatory Flexibility Analysis (Final Report & Order), which was incorporated as Appendix C to the *First Report & Order* in this docket.<sup>3</sup> The FRFA-First Report & Order conforms to the RFA.<sup>4</sup> On reconsideration of the *First Report & Order*, parties commented on the FRFA-First Report & Order. The comments received on the FRFA-First Report & Order discussed in the Supplemental Final Regulatory Flexibility Analysis (Supplemental FRFA) incorporated into *First Order on Reconsideration* in this docket.<sup>5</sup> The Supplemental FRFA conforms to the RFA.<sup>6</sup> The Final Regulatory Flexibility Analysis (FRFA-Second Report & Order) is incorporated as an appendix to this *Second Report & Order* in this docket, in which the Commission adopts, to the extent described therein, the recommendations of the North American Numbering Council (NANC) regarding the implementation of local portability. The *First Report & Order* directed the NANC to make these recommendations and forward them to the Commission, which then requested public comment on the recommendations.<sup>7</sup> The FRFA-Second Report & Order also conforms to the RFA.<sup>8</sup>

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Reform Act of 1996 (SBREFA).

<sup>2</sup> *Telephone Number Portability*, Notice of Proposed Rulemaking, 10 FCC Rcd 12350, 12376-77 (1995) (*Notice*).

<sup>3</sup> *Telephone Number Portability*, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 8352, 89 (1996) (*First Report & Order*).

<sup>4</sup> See 5 U.S.C. § 604.

<sup>5</sup> *Telephone Number Portability*, First Memorandum Opinion and Order on Reconsideration, CC Docket No. 95-116, FCC 94 (rel. March 11, 1997), *further recon. pending*, Appendix D (*First Order on Reconsideration*).

<sup>6</sup> See 5 U.S.C. § 604.

<sup>7</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>8</sup> See 5 U.S.C. § 604.

**A. Need for and Objectives of *Second Report and Order***

2. The need for and objectives of the requirements adopted in this *Second Report and Order* are the same as those discussed in the Final Regulatory Flexibility Analysis in the *First Report & Order*.<sup>9</sup> The Commission, in compliance with sections 251(b)(2) and 251(d)(1) of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 (1996 Act), adopts requirements and procedures intended to ensure prompt implementation of telephone number portability with the minimum regulatory and administrative burden on telecommunications carriers. These requirements are necessary to implement the provision in the 1996 Act that requires local exchange carriers (LECs) to offer number portability, if technically feasible. In implementing the statute, the Commission has the responsibility to adopt requirements that will implement most quickly and effectively the telecommunications policy embodied in the 1996 Act and to promote the pro-competitive, deregulatory market structure envisioned by Congress. Congress has recognized that number portability will lower barriers to entry and promote competition in the local exchange marketplace. Specifically, we adopt the recommendations of the NANC regarding the selection of local number portability administrators, the location of regional databases, the overall national architecture and technical specifications for the regional databases, and the duties of local number portability administrators in administering the number portability regional databases.

**B. Summary of Significant Issues Raised By Public Comments in response to the IRFA,<sup>10</sup> FRFA-First Report & Order and Supplemental FRFA**

3. The comments received on the IRFA were discussed in the FRFA-First Report & Order and incorporated into the *First Report & Order*.<sup>11</sup> The comments received on the FRFA-First Report & Order were discussed in the Supplemental FRFA incorporated into the *First Order on Reconsideration*.<sup>12</sup> No additional comments were sought or received for purposes of the FRFA-Second Report & Order.

**C. Summary of the FRFA-First Report & Order**

4. In the FRFA-First Report & Order, we concluded that incumbent LECs do not qualify as small businesses because they are dominant in their field of operation, and, accordingly, we did not address the impact of our requirements on incumbent LECs.<sup>13</sup> We noted that the RFA generally defines the term "small business"

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<sup>9</sup> *First Report & Order*, 11 FCC Rcd at 8486.

<sup>10</sup> For a summary of the IRFA and an analysis of the significant issues raised in response to the IRFA, see *First Report & Order*, 11 FCC Rcd at 8486-87.

<sup>11</sup> *First Report & Order*, 11 FCC Rcd at 8486-89.

<sup>12</sup> *First Order on Reconsideration* at Appendix D.

<sup>13</sup> *First Report & Order* at 8487.

the same meaning as the term "small business concern" under the Small Business Act.<sup>14</sup> A small business concern is one that (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies additional criteria established by the Small Business Administration (SBA).<sup>15</sup> According to the SBA's regulations, entities engaged in the provision of telephone service may have a maximum of 1,500 employees in order to qualify as a small business concern.<sup>16</sup> This standard also applies in determining whether an entity is a small business for the purposes of the Regulatory Flexibility Act.<sup>17</sup>

5. We did recognize that our requirements may have a significant economic impact on a substantial number of small businesses insofar as they apply to telecommunications carriers other than incumbent LECs including competitive LECs, as well as cellular, broadband personal communications services (PCS), and covered specialized mobile radio (SMR) providers. Based upon data contained in the most recent census and a report from the Commission's Common Carrier Bureau, we estimated that 2,100 carriers could be affected.<sup>18</sup> We also discussed reporting requirements imposed by the *First Report & Order*.<sup>19</sup>

6. Finally, we discussed the steps we had taken to minimize the impact on small entities, consistent with our stated objectives.<sup>20</sup> We concluded that our actions in the *First Report & Order* would benefit small entities by facilitating their entry into the local exchange market. We found that the record in this proceeding indicated that the lack of number portability would deter entry by competitive providers of local service because of the value customers place on retaining their telephone numbers.<sup>21</sup> These competitive providers, many of which are small entities, may find it easier to enter the market as a result of number portability, which will eliminate the barrier to entry.<sup>22</sup> We noted that, in general, we attempted to keep burdens on local exchange carriers to a minimum. For example, we adopted a phased deployment schedule for implementation in the 100 largest MSAs, and then proceeded upon a carrier's request; we conditioned the provision of currently available measures upon request only; we required cellular, broadband PCS, and covered SMR providers, which may be small businesses, to offer current

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<sup>14</sup> *Id.*; 15 U.S.C. § 632.

<sup>15</sup> *First Report & Order*, 11 FCC Rcd at 8487; 15 U.S.C. § 632.

<sup>16</sup> *First Report & Order*, 11 FCC Rcd at 8487; 13 C.F.R. § 121.201.

<sup>17</sup> *First Report & Order*, 11 FCC Rcd at 8487.

<sup>18</sup> *Id.* at 8487-88.

<sup>19</sup> *Id.* at 8488-89.

<sup>20</sup> *Id.*

<sup>21</sup> *See id.* at 8368, 8489.

<sup>22</sup> *See id.* at 8367-68, 8489.

available number portability measures; and we did not require paging and messaging service providers, which small entities, to provide any number portability.<sup>23</sup>

#### D. Summary of the Supplemental FRFA

7. *Implementation Schedule.* In the *First Report & Order*, we required local exchange carriers operating in the 100 largest MSAs to offer long-term service provider portability, according to a phase deployment schedule commencing on October 1, 1997, and concluding by December 31, 1998, set forth in Appendix F of the *First Report & Order*.<sup>24</sup> In the *First Order on Reconsideration*, we extended the end dates for Phase I of our deployment schedule by three months, and for Phase II by 45 days. Thus, deployments now take place in Phase I from October 1, 1997, through March 31, 1998, and in Phase II from January 1, 1998, through May 15, 1998. We also clarified that LECs need only provide number portability within the 100 largest MSAs in switches for which another carrier has made a specific request for the provision of portability. LECs must make available lists of their switches for which deployment has and has not been requested. The parties involved in such requests identifying preferred switches may need to use legal, accounting, economic and/or engineering services.<sup>25</sup>

8. In the *First Order on Reconsideration*, we reduced the burdens on rural and smaller LECs by establishing a procedure whereby, within as well as outside the 100 largest MSAs, portability need only be implemented in the switches for which another carrier has made a specific request for the provision of portability if competition is not imminent in the areas covered by rural/small LEC switches, then the rural or smaller LEC need not receive requests from competing carriers to implement portability, and thus need not expend its resources if competition does develop. By that time, extensive non-carrier-specific testing will likely have been done, and rural and small LECs need not expend their resources on such testing. We noted that the majority of parties representing small or rural LECs specified as the relief sought that we only impose implementation requirements where competing carriers have shown interest in portability. Moreover, our extension of Phases I and II of our deployment schedule may permit smaller LECs to reduce their testing costs by allowing time for larger LECs to test and resolve the problems of this new technology.<sup>26</sup>

9. In the *First Order on Reconsideration*, we rejected several alternatives put forth by parties that might impose greater burdens on small entities and small incumbent LECs. We rejected requests to accelerate the deployment schedule for areas both within and outside the 100 largest MSAs. We also rejected the procedure proposed by some parties that would require LECs to file waiver requests for their specific switches if they had

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<sup>23</sup> See *id.* at 8489.

<sup>24</sup> *First Report & Order*, 11 FCC Rcd at 8393.

<sup>25</sup> *First Order on Reconsideration* at D-10 - D-12.

<sup>26</sup> *Id.*

there is no competitive interest in those switches, instead of requiring LECs to identify in which switches of LECs they wish portability capabilities. The suggested waiver procedures would burden the LEC from whom portability is requested with preparing and filing the petition for waiver. In addition, a competing carrier that the waiver petition would be burdened with challenging the waiver. In contrast, under the procedure we establish only reporting burden on requesting carriers is to identify and request their preferred switches. Carriers from whom portability is being requested, which may be small incumbent LECs, only incur a reporting burden if they wish to lessen their burdens further by requesting more time in which to deploy portability. Finally, we clarified that providers, like wireline providers, need only provide portability in requested switches, both within and outside 100 largest MSAs.<sup>27</sup>

**E. Description and Estimates of the Number of Small Entities Affected by this Second Report and Order**

10. For the purposes of this *Second Report and Order*, the RFA defines a "small business" to be the same as a "small business concern" under the Small Business Act, 15 U.S.C. § 632, unless the Commission developed one or more definitions that are appropriate to its activities.<sup>28</sup> Under the Small Business Act, a "small business concern" is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation and (3) meets any additional criteria established by the SBA.<sup>29</sup> SBA has defined a small business for Standard Industrial Classification (SIC) categories 4812 (Radiotelephone Communications) and 4813 (Telephone Communications, Except Radiotelephone) to be small entities with fewer than 1,500 employees.<sup>30</sup>

11. The requirements adopted in this *Second Report and Order* governing regional databases to be utilized for long-term number portability apply to all LECs, including incumbent LECs as well as new LECs and also apply to interexchange carriers, cellular, broadband PCS, and covered SMR providers. According to the SBA definition, incumbent LECs do not qualify as small businesses because they are dominant in their field of operation. Accordingly, we will not address the impact of these requirements on incumbent LECs.

12. Our actions in this *Second Report & Order* will generally benefit small entities by facilitating their entry into the local exchange market. The record in this proceeding indicates that the lack of number portability would deter entry by competitive providers of local service because of the value customers place on retaining telephone numbers.<sup>31</sup> This *Second Report and Order* adopts the technical and operational standards and

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<sup>27</sup> *Id.*

<sup>28</sup> See 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 5 U.S.C. § 632).

<sup>29</sup> 15 U.S.C. § 632. See, e.g., *Brown Transport Truckload, Inc. v. Southern Wipers, Inc.*, 176 B.R. 82 (N.D. Ga. 1994).

<sup>30</sup> 13 C.F.R. § 121.201.

<sup>31</sup> See *First Report & Order* at 8368, 8489.

procedures needed to implement local number portability. Competitive providers, many of which may be small entities, may find it easier to enter the market as a result of number portability, which will eliminate this barrier.<sup>32</sup> We note that, in general, we attempted to keep burdens on local exchange carriers to a minimum.

13. Our requirements, however, may have a significant economic impact on a substantial number of small businesses insofar as they apply to telecommunications carriers other than incumbent LECs. In particular, our requirements may have such an impact upon new entrant LECs, as well as cellular, broadband PCS, and covered providers. These impacts are discussed further below.

14. *Total Number of Telephone Companies Affected.* The United States Bureau of the Census ("the Census Bureau") reports that, at the end of 1992, there were 3,497 firms engaged in providing telephone services, as defined therein, for at least one year.<sup>33</sup> This number contains a variety of different categories of carriers, including local exchange carriers, interexchange carriers, cellular carriers, mobile service carriers, broadband providers, and covered SMR providers. It seems certain that some of those 3,497 telephone service firms may not qualify as small entities or small incumbent LECs because they are not "independently owned and operated." For example, a PCS provider that is affiliated with an interexchange carrier having more than 1,500 employees may not meet the definition of a small business. It seems reasonable to tentatively conclude that fewer than 3,497 telephone service firms are small entity telephone service firms or small incumbent local exchange carriers.

## 1. Common Carrier Services and Related Entities

15. According to the *Telecommunications Industry Revenue: Telecommunications Relay Service Fund Worksheet Data (TRS Worksheet)*,<sup>35</sup> there are 2,847 interstate carriers. These carriers include, *inter alia*, local exchange carriers, wireline carriers and service providers, interexchange carriers, competitive providers, operator service providers, pay telephone operators, providers of telephone toll service, providers of telephone exchange service, and resellers.

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<sup>32</sup> See *id.* at 8367-68, 8489.

<sup>33</sup> United States Department of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities: Establishment and Firm Size*, at Firm Size 1-123 (1992 Census).

<sup>34</sup> 15 U.S.C. § 632(a)(1).

<sup>35</sup> Federal Communications Commission, CCB, Industry Analysis Division, *Telecommunications Industry Revenue: TRS Fund Worksheet Data*, Tbl. 1 (Average Total Telecommunications Revenue Reported by Class of Carrier) (December 1996) (*TR Worksheet*).

16. *Wireline Carriers and Service Providers.* The SBA has developed a definition of small entities for telephone communications companies except radiotelephone (wireless) companies. The Census 1

reports that, there were 2,321 such telephone companies in operation for at least one year at the end of 1992. According to the SBA's definition, a small business telephone company other than a radiotelephone company employing fewer than 1,500 persons.<sup>37</sup> All but 26 of the 2,321 non-radiotelephone companies listed by the C Bureau were reported to have fewer than 1,000 employees. Thus, even if all 26 of those companies had more than 1,500 employees, there would still be 2,295 non-radiotelephone companies that might qualify as small entities under the SBA's definition. We do not have information on the number of carriers that are not independently owned and operated, and thus are unable at this time to estimate with greater precision the number of wireline carriers and providers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate there are fewer than 2,295 small telephone communications companies other than radiotelephone companies.

17. *Local Exchange Carriers.* Neither the Commission nor the SBA has developed a definition for small providers of local exchange services (LECs). The closest applicable definition under the SBA rule is for telephone communications companies other than radiotelephone (wireless) companies.<sup>38</sup> The most reliable source of information regarding the number of LECs nationwide is the data that we collect annually in connection with the *Worksheet*. According to our most recent data, 1,347 companies reported that they were engaged in the provision of local exchange services.<sup>39</sup> We do not have information on the number of carriers that are not independently owned and operated, nor what carriers have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of LECs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,347 small incumbent LECs.

18. *Interexchange Carriers.* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to providers of interexchange services (IXCs). The closest applicable definition under the SBA rules is for telephone communications companies except radiotelephone (wireless) companies. The most reliable source of information regarding the number of IXCs nationwide is the data that we collect annually in connection with the *TRS Worksheet*. According to our most recent data, 130 companies reported that they were engaged in the provision of interexchange services.<sup>41</sup> We do not have information on the number of carriers not independently owned and operated, nor have more than 1,500 employees, and thus we are unable at this time to estimate with greater precision the number of IXCs that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are fewer than 130 small entity IXCs.

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<sup>36</sup> 1992 Census at Firm Size 1-123.

<sup>37</sup> 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

<sup>38</sup> 13 C.F.R. § 121.201, SIC Code 4813.

<sup>39</sup> *TRS Worksheet*.

<sup>40</sup> 13 C.F.R. § 121.201, SIC 4813.

<sup>41</sup> *TRS Worksheet*.

## 2. Wireless and Commercial Mobile Services

19. *Wireless (Radiotelephone) Carriers.* SBA has developed a definition of small entities for radiotelephone (wireless) companies. The Census Bureau reports that there were 1,176 such companies in operation for at least one year at the end of 1992.<sup>42</sup> According to SBA's definition, a small business radiotelephone company employs fewer than 1,500 persons.<sup>43</sup> The Census Bureau also reported that 1,164 of those radiotelephone companies had fewer than 1,000 employees. Thus, even if all of the remaining 12 companies had more than 1,000 employees, there would still be 1,164 radiotelephone companies that might qualify as small entities if they are independently owned and operated. Although it seems certain that some of these carriers are not independently owned and operated, we are unable at this time to estimate with greater precision the number of radiotelephone carriers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,164 small entity radiotelephone companies that may be affected by the decisions and requirements adopted in this *Second Report and Order*.

20. *Cellular Licensees.* Neither the Commission nor the SBA has developed a definition of small entities applicable to cellular licensees. The closest applicable definition of small entity is the definition under SBA rules applicable to radiotelephone (wireless) companies (SIC 4812). The most reliable source of information regarding the number of cellular services carriers nationwide of which we are aware appears to be the data that the Commission collects annually in connection with the *TRS Worksheet*.<sup>44</sup> According to the most recent data, 792 companies reported that they were engaged in the provision of cellular services.<sup>45</sup> Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of cellular services carriers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are fewer than 792 small cellular carriers.

21. *Broadband PCS Licensees.* The broadband PCS spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission defines "small entity" for Blocks C and F as an entity that has average gross revenues of less than \$40 million in the previous calendar years.<sup>46</sup> For Block F, an additional classification for "very small business" was added and

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<sup>42</sup> 1992 Census at Firm Size 1-123.

<sup>43</sup> 13 C.F.R. § 121.201, SIC Code 4812.

<sup>44</sup> *TRS Worksheet*.

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

<sup>46</sup> See *Amendment of Parts 20 and 24 of the Commission's Rules -- Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, Report and Order, FCC 96-278, WT Docket No. 96-253, ¶¶ 57- 60 (re

defined as an entity that, together with their affiliates, has average gross revenues of not more than \$15 million preceding three calendar years.<sup>47</sup> These regulations defining "small entity" in the context of broadband PCS have been approved by the SBA. No small businesses within the SBA-approved definition bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auction. A total of 93 small and very small business bidders won approximately 40 percent of the 1,479 licenses for Blocks D and F.<sup>48</sup> However, licenses for blocks C through F have not been awarded fully; therefore, there are few, if any, small businesses currently providing PCS services. Based on this information, we conclude that the number of small broadband PCS licensees will include the 90 winning C Block bidders and the 93 qualifying bidders in the D and F blocks, for a total of 183 small PCS providers as defined by the SBA and the Commission's auction rules.

22. *SMR Licensees.* Pursuant to 47 C.F.R. § 90.814(b)(1), the Commission has defined "small entity" in auctions for geographic area 800 MHz and 900 MHz SMR licenses as a firm that had average annual revenues of less than \$15 million in the three previous calendar years. This definition of a "small entity" in the context of 800 MHz and 900 MHz SMR has been approved by the SBA.<sup>49</sup> The requirements adopted in this *Report and Order* may apply to SMR providers in the 800 MHz and 900 MHz bands that either hold geographic area licenses or have obtained extended implementation authorizations. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of less than \$15 million. We assume, for purposes of this First Report & Order, that all of the extended implementation authorizations may be held by small entities and may be affected by the decisions and requirements adopted in this *Second Report and Order*.

23. The Commission's auctions for geographic area licenses in the 900 MHz SMR band concluded in April of 1996. There were 60 winning bidders who qualified as small entities in the 900 MHz auction. Based on this information, we conclude that the number of geographic area SMR licensees affected by the requirements adopted in this *Second Report and Order* includes these 60 small entities. No auctions have been held for 800 MHz geographic area SMR licenses. Therefore, no small entities currently hold these licenses. A total of 525 licenses will be awarded for the upper 200 channels in the 800 MHz geographic area SMR auction. However, the Commission has not yet determined how many licenses will be awarded for the lower 230 channels in the 800 MHz geographic

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June 24, 1996) (*Amendment of Parts 20 and 24 Order*); see also 47 C.F.R. § 24.720(b).

<sup>47</sup> See *Amendment of Parts 20 and 24 Order* at ¶ 60.

<sup>48</sup> FCC News, *Broadband PCS, D, E and F Block Auction Closes*, No. 71744 (rel. Jan. 14, 1997).

<sup>49</sup> See *Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool*, PR Docket No. 89-553, Second Order on Reconsideration and Seventh Report & Order, 11 FCC Rcd 2639, (1995); *Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band*, PR Docket No. 93-144, First Report and Order, Eighth Report and Order, and Second Further Notice Proposed Rulemaking, 11 FCC Rcd 1463 (1995).

SMR auction. There is no basis, moreover, on which to estimate how many small entities will win these licenses. Given that nearly all radiotelephone companies have fewer than 1,000 employees and that no reliable estimate of the number of prospective 800 MHz licensees can be made, we assume, for purposes of this FRFA-Second Report and Order, that all of the licenses may be awarded to small entities who, thus, may be affected by the decisions in this *Second Report and Order*.

#### **F. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements**

24. There are several reporting requirements imposed by the *Second Report and Order* that are likely to require the services of persons with technical expertise to prepare the reports. Most of these reporting requirements, however, are imposed on the NANC, a federal advisory committee, as opposed to a "small entity" within the meaning of the RFA.<sup>50</sup> In particular, the Commission directs the NANC to present its recommendations regarding the provision of number portability by wireless carriers within nine months of the release of the *Second Report and Order*. Further, the NANC is directed to review the request of Cincinnati Bell Telephone Company that it be allowed to select one of the regional number portability databases for purposes of fulfilling its number portability responsibilities and to make a recommendation to the Commission by December 15, 1997. Moreover, as part of its general oversight of the local number portability administrators, the NANC is directed to submit recommendations concerning local number portability to the Commission from time to time. Following the adoption of a recommendation regarding the administration of number portability, the NANC is directed to issue a written report to the Commission summarizing the positions of the parties and the basis for the recommendation adopted by the NANC.<sup>51</sup> In addition, pursuant to the *Second Report & Order*, each U.S. territory (*i.e.*, Puerto Rico, U.S. Virgin Islands, Guam and the Commonwealth of the Northern Mariana Islands) is directed to: (1) select a number portability database that carriers in that territory will use to provide number portability; and (2) notify the Commission through the NANC in writing regarding this selection within 45 days of the release of the *Second Report and Order*. There are no significant reporting, recordkeeping or other compliance requirements imposed by this *Second Report and Order* on other entities.

#### **G. Steps Taken to Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered**

25. The Commission's actions in this *Second Report and Order* will benefit small entities by facilitating their entry into the local exchange market. The record in this proceeding indicates that the lack of number portability would deter entry by competitive providers of local service because of the value customers place

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<sup>50</sup> See 5 U.S.C. § 601(3); Small Business Act, 15 U.S.C. § 632; 5 U.S.C. § 601(5).

<sup>51</sup> See *Second Report and Order*, Sections III.D.3, III.A.1.c, III.E.3.

retaining their telephone numbers.<sup>52</sup> These competitive providers, many of which may be small entities, may find it easier to enter the market as a result of number portability which will eliminate this barrier to entry.<sup>53</sup>

26. In general in this docket, we have attempted to keep burdens on local exchange carriers to a minimum. The regulatory burdens we have imposed are necessary to ensure that the public receives the benefit of the expeditious provision of service provider number portability in accordance with the statutory requirements. We believe that the *Second Report & Order* furthers our commitment to minimizing regulatory burdens on small entities. For example, the NANC had recommended that we allow LECs to block calls whenever a carrier transmits a call to a terminating LEC fails to query the number portability database to determine if a number has been ported. This recommendation would have required carriers transmitting calls to terminating LECs to reconfigure their networks to perform database queries or to pay another entity to perform a database query on their behalf. Permitting LECs to block unqueried calls could have negatively affected CMRS providers, who are not required to query the database until December 31, 1998. We, therefore, only allow terminating LECs to block calls when failure to do so is likely to impair network reliability.<sup>54</sup> The volume of calls transferred to terminating LECs is unlikely to reach a level that could impair network reliability. As a result, terminating LECs are unlikely to block calls handled by small entities. Furthermore, carriers can make arrangements with other carriers to perform database queries on their behalf. Based on the record before us, we do not find that any of the recommendations we adopt in the *Second Report & Order* will have a disproportionate impact on small entities.

27. Report to Congress: The Commission will send a copy of the *Second Report & Order*, including the FRFA-Second Report & Order, in a report to be sent to Congress pursuant to the Small Business Regulatory Fairness Act of 1996.<sup>55</sup> A copy of the *Second Report & Order* and this FRFA-Second Report & Order (or summary thereof) will also be published in the Federal Register and will be sent to the Chief Counsel for Advocacy of the Small Business Administration.<sup>56</sup>

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<sup>52</sup> See *First Report & Order*, 11 FCC Rcd at 8368.

<sup>53</sup> See *First Report & Order*, 11 FCC Rcd at 8367-68.

<sup>54</sup> See *Second Report and Order* at ¶ 76.

<sup>55</sup> See 5 U.S.C. § 801(a)(1)(A).

<sup>56</sup> See 5 U.S.C. § 604(b).