

FCC MAIL SECTION

Federal Communications Commission

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

In the Matter of	)	
	)	
Administration of the	)	
North American Numbering Plan	)	CC Docket No. 92-237
Carrier Identification Codes (CICs)	)	
	)	
Petition for Rulemaking of	)	
VarTec Telecom., Inc.	)	

**SECOND REPORT AND ORDER**

**Adopted:** April 7, 1997

**Released:** April 11, 1997

By the Commission:

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## I. INTRODUCTION

1. Carrier Identification Codes (CICs) are numeric codes that, as originally devised, enabled local exchange carriers (LECs), as providers of interexchange access services, to identify access customers in order to bill and route traffic to such customers.<sup>1</sup> CICs facilitate competition by enabling callers to use the services of any number of telecommunications service providers. For example, they enable a caller to presubscribe to the local or long-distance carrier of his choice. In addition, a carrier's CIC, which is the suffix of that carrier's Carrier Access Code (CAC), enables callers to reach any carrier (presubscribed or otherwise) from any telephone. Thus, from any telephone, a caller may dial a seven digit CAC format ("101XXXX") to reach a carrier, with the last four digits ("XXXX") representing that carrier's unique four digit Feature Group D CIC.<sup>2</sup>

2. Over the past two decades, through a series of proceedings, the Commission has developed policies to foster competition in interstate telecommunications. Among these has been its policy governing the management of CICs.<sup>3</sup> In April 1994, the Commission

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<sup>1</sup> Access providers are typically local exchange carriers that provide access customers with circuits that interconnect to the local carrier's public switched telephone network. Commission rules require that "interstate access services should be made available on a non-discriminatory basis and, as far as possible, without distinction between end user and IC [interexchange carrier] customers." Petition of First Data Resources, Inc., Regarding the Availability of Feature Group B Access Service to End Users, Memorandum Opinion and Order, 1986 WL 291786, (1986), released May 28, 1986 (First Data Resources Order) at para. 13. Typical access customers include interexchange carriers, wireless carriers, competitive access providers, and large corporate users. CIC assignment guidelines were developed by the Industry Carriers Compatibility Forum (ICCF), under the auspices of the Carrier Liaison Committee (CLC) which is sponsored by the Alliance for Telecommunications Solutions (ATIS). Currently, the Industry Numbering Committee (INC), a subcommittee of the ICCF, develops these guidelines. The most recent version of these guidelines was issued in September 1996. See Carrier Identification Code Assignment Guidelines, INC 95-0127-006, formerly ICCF 92-0726-002, Revision September 1996 (CIC Assignment Guidelines, September 1996).

<sup>2</sup> With three digit Feature Group D CICs, the CAC is five digits ("10XXX"), with the last three digits ("XXX") representing the chosen carrier's assigned CIC. For example, AT&T has "288" as its three digit CIC. Existing three digit CICs become four digits by adding a "0" before the three digit CIC, thus AT&T's four digit CIC becomes "0288." During the transition, callers may dial either of these codes as suffixes for CACs to reach AT&T's network. Once the transition ends, however, callers can reach a carrier only by dialing its seven digit CAC in which a four digit CIC is embedded. Throughout this Second Report and Order, we use the terms "three digit Feature Group D CICs" and "three digit CICs" interchangeably, and "four digit Feature Group D CICs" and "four digit CICs" interchangeably.

<sup>3</sup> See generally, Exchange Network Facilities for Interstate access (ENFIA) Memorandum Opinion and Order, CC Docket No. 78-371, 71 FCC 2d 440, (1979) (ENFIA Order); MTS and WATS Market Structure, Report and Third Supplemental Notice of Inquiry and Proposed Rulemaking, CC Docket No. 78-72, 81 FCC 2d 177, (1980) (Market Structure Order); Economic Implications and Interrelationships Arising from Policies and Practices Relating to Customer Interconnection, Jurisdictional Separations and Practices Relating to Customer Interconnection, Jurisdictional Separations and Rate Structures, Docket No. 20003, Second Report, 1980 (Interconnection Study).

issued a Notice of Proposed Rulemaking<sup>4</sup> (NPRM) tentatively concluding that an industry plan to expand Feature Group D CICs<sup>5</sup> from three to four digits, in anticipation of all the three digit codes being assigned,<sup>6</sup> was a reasonable way to ensure that future demand for CICs could be met. The NPRM also tentatively concluded that a six-year transition, or permissive dialing period,<sup>7</sup> was reasonable and necessary to move the industry from three to four digit CICs.<sup>8</sup> During the transition, callers and carriers could use both three and four digit CICs.

3. Since the NPRM, demand for CICs has grown because the number of carriers requesting CICs has increased and because carriers are using CICs for an increasing number of purposes.<sup>9</sup> Moreover, three digit Feature Group D CICs are no longer available for

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<sup>4</sup> See Administration of the North American Numbering Plan, Notice of Proposed Rulemaking, CC Docket No. 92-237, 9 FCC Rcd 2068 (1994) (NPRM).

<sup>5</sup> Beginning in 1983, the industry developed a system of interconnection access arrangements referred to as "Feature Groups." See United States v. Western Electric Co., 569 F. Supp. 1057 (D.D.C. 1983). The first two such arrangements, known as Feature Group A and Feature Group B, evolved from the Bell System's interconnection access arrangements for non-affiliated carriers. These Bell System access arrangements were known previously as "ENFIA A" and "ENFIA B" arrangements, respectively. After the dissolution of the Bell System, the "ENFIA B" access arrangement became the Feature Group B access arrangement, which provided the IXCs with a universal access code (950-1XX where XX represented the two digit CIC). Feature Groups A and B, as well as two others, Feature Group C and Feature Group D, currently are in use. Feature Group D CICs, the subject of the current industry expansion plan and the focus of this Second Report and Order, were for Feature Group D access or "equal access."

<sup>6</sup> The North American Numbering Plan (NANP) administrator assigns CICs using guidelines developed by the industry. The NANP is the basic numbering scheme for the telecommunications networks located in Anguilla, Antigua, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent, Turks & Caicos Islands, Trinidad & Tobago, and the United States (including Puerto Rico, the U.S. Virgin Islands, Guam and the Commonwealth of the Northern Mariana Islands).

<sup>7</sup> The terms "transition" and "permissive dialing period" will be used interchangeably throughout this Second Report and Order.

<sup>8</sup> As with area code changes, changing the number of digits in carrier identification codes requires planning by many different industries and users of telephone service. For example, preparing for conversion from three digit Feature Group D CICs to four digit Feature Group D CICs requires carriers to reprogram and upgrade network (or public) switches and educate callers, equipment owners to reprogram and upgrade PBX switches, and manufacturers to develop and provide software and hardware to equipment owners and carriers. See paragraph 10, infra for a discussion of how changes in CICs affect various entities.

<sup>9</sup> As of April 4, 1997, an estimated 104 companies have multiple CICs. See Letter from Nancy Fears, Bell Communications Research, NANP Administration, to Elizabeth Nightingale, FCC, Common Carrier Bureau, dated April 4, 1997. Multiple CIC holders use their CICs for various purposes. Some carriers use CICs as inexpensive and convenient billing mechanisms. Some resellers use CICs to bill callers through an Regional Bell Operating Company's (RBOC) bill.

assignment. As of April 1, 1995, the day after assignment of the last available three digit CIC, only four digit Feature Group D CICs were available for assignment. Furthermore, implementation of the amendments to the Communications Act of 1934 (the Act) in the Telecommunications Act of 1996 (1996 Act)<sup>10</sup> most likely will increase the number of telecommunications carriers entering the market and create an increased need for CICs so that traffic can be routed to these new entities.<sup>11</sup> Consequently, we recently issued a Public Notice<sup>12</sup> to refresh the record in this docket with information that would permit the Commission to establish a reasonable period for the industry to complete the steps necessary for a total conversion from three digit Feature Group D CICs to four digit Feature Group D CICs.

4. In this Second Report and Order, we affirm the NPRM's tentative conclusion that the Feature Group D CIC expansion plan developed by the industry is reasonable, and we determine that the transition for the conversion from three digit to four digit Feature Group D CICs will end on January 1, 1998. Because of the changing circumstances since the record in this docket closed in 1994, we find that the transition should end as soon as practicable, and that shortening the originally proposed six-year transition to a two-year and nine month transition will serve the overall pro-competitive purposes of the Act (by making more CICs available), as well as the specific purposes of Sections 251(e) (by ensuring that numbers are available on an equitable basis) and 251(b)(3) (by lessening hardships, consistent with the duty imposed on all LECs to provide nondiscriminatory access to telephone numbers, caused

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<sup>10</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).

<sup>11</sup> Also, the Commission's intraLATA toll dialing parity requirements resulting from the Act's dialing parity requirement may lead to an increased demand for CICs. The Commission's requirements may cause carriers wishing to enter local and long distance markets simultaneously to use CICs to segment their customers (local customers versus long distance customers). See Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket 96-98, Second Report and Order and Memorandum Opinion and Order, FCC 96-333 (rel. Aug 8, 1996), stay pending (Local Competition Second Report and Order) at paras. 31-59.

In the future, Commercial Mobile Radio Services (CMRS) may be required to use Feature Group D CICs to provide equal access services. Even though they are not classified as LECs, CMRS providers also provide interexchange access services. Unlike LECs, however, CMRS providers, to the extent they are engaged in the provision of commercial mobile services, are not required to provide equal access to common carriers for the provision of telephone toll services. If the Commission were to find that CMRS subscribers are denied access to their chosen provider of telephone toll services, and that such denial is contrary to the public interest, convenience, and necessity, then the Commission would have to prescribe regulations to afford subscribers unblocked access to the provider of telephone toll services of the subscribers' choice, through the use of a CIC assigned to such provider or some other mechanism. See 47 U.S.C. § 332(c)(8); see also Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, Order, CC Docket No. 94-54, FCC 96-126 (rel. Mar. 22, 1996) (Commission stated that information currently available to it does not establish a need at this time to initiate an inquiry into the imposition of the unblocked access rule).

<sup>12</sup> Further Comments. Carrier Identification Codes, CC Docket No. 92-237. Public Notice DA 96-678 (Common Carrier Bureau, April 30, 1996).

by the conservation plan's limiting access to CICs). To lessen any disadvantage new entrants may experience during the transition in particular, we also modify the ongoing CIC conservation<sup>13</sup> plan to allow each entity to have two CIC assignments. We determine that shortening the originally proposed six-year period is reasonable because the industry has been aware for some time that equipment changes (both hardware and software) to accommodate exclusive use of four digit CICs would be necessary. We conclude that ending the transition on January 1, 1998, provides a reasonable period for carriers and equipment owners to reprogram their switch software or upgrade their switch hardware and for callers to become accustomed to the change from five to seven digit CACs.<sup>14</sup> We also require the North American Numbering Plan (NANP) administrator, as the entity assigning CICs,<sup>15</sup> to notify all CIC assignees of our decision in this Second Report and Order. Finally, we intend to initiate further proceedings in this docket in which we shall analyze further all issues related to CIC use and assignment.

## II. BACKGROUND

### A. The Transition to Four Digit Feature Group D Carrier Identification Codes

5. In 1989, Bell Communications Research (Bellcore), the NANP administrator for administering and assigning CICs, informed the Chief of the Common Carrier Bureau (Bureau) of the projected assignment date of the last unassigned three digit CICs.<sup>16</sup> Thus, in 1989, the industry was made aware of the scarcity of CICs and that three digit CICs would soon need to be replaced by four digit CICs.<sup>17</sup> The Industry Carriers Compatibility Forum (ICCF) had, in 1988, begun to develop an expansion plan, the second part of which, originally scheduled to occur in the third quarter of 1993, contemplated expansion of three digit Feature

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<sup>13</sup> See para. 8, infra for a description of CIC conservation measures.

<sup>14</sup> Equipment owners could include entities leasing equipment. Throughout this Second Report and Order we refer to reprogramming software and upgrading hardware. See para. 10, infra for a description of how equipment is reprogrammed and upgraded.

<sup>15</sup> See footnote 6, supra.

<sup>16</sup> See Letter from G.J. Handler, Vice President, Network Planning, Bellcore to Richard M. Firestone, Chief, Common Carrier Bureau, dated October 13, 1989 (Handler Letter).

<sup>17</sup> The industry also has been aware since at least 1991 that it would need to develop the software and hardware to support only four digit CICs in accordance with Bellcore's expansion plan, upgrade or replace equipment, and upgrade networks, either through software or hardware changes. See Expansion of Carrier Identification Code Capacity for Feature Group D (Feature Group D), Bellcore Technical Reference TR-NWT-001050, Issue 1, April 1991 (Bellcore Expansion Document) at Section 1, p.3.

Group D CICs to four digits and eventual elimination of the 10XXX CAC format.<sup>18</sup> The industry agreed that a transition was needed for two purposes, although it was unable to agree on the length of a transition during which customers could dial either five or seven digit CACs.<sup>19</sup> First, the industry agreed that a transition would give carriers and equipment owners (such as PBX owners) time to make the necessary changes in their networks and support systems capable of accepting four digit Feature Group D CICs for call routing. The industry acknowledged that such changes could not occur instantaneously within the public switched network because changes would need to be made switch-by-switch. Second, the transition would give callers time to become accustomed to the new dialing pattern. This way of meeting the needs of carriers, equipment owners and callers to adjust to this numbering change would be consistent with the way other numbering changes have been introduced (e.g., area code changes).

6. In the third quarter of 1994, the assignment of all available three digit Feature Group D CICs appeared imminent, and at that time, Bellcore began assigning four digit Feature Group D CICs. By March 31, 1995, all available three digit Feature Group D CICs had been assigned.<sup>20</sup> On April 1, 1995, therefore, the transition commenced, during which either three or four digit Feature Group D CICs may be used, and callers may use either the five digit (10XXX) or seven digit (101XXXX) CAC format to reach their chosen IXC.

7. For technical reasons, the permissive dialing period can last only as long as the 2,000 four digit CICs available for assignment during the transition. Because Bellcore realized that a transition, during which both three digit and four digit Feature Group D CICs would be in use, would be necessary, it refrained from issuing three digit CICs with either a "5" or a "6" as the first digit (CICs in the 5XX and 6XX range). Bellcore anticipated that in order to introduce four digit CICs while three digit CICs would still be in use, the four digit CICs would need to begin with a number different than the first number of any three digit CIC. Because it had not assigned any three digit CICs beginning with a "5" or a "6," Bellcore was able to assign four digit CICs beginning with these numbers during the transition (CICs in the 5XXX and 6XXX range). Bellcore was compelled to determine that these would be the only four digit CICs assigned during the transition.<sup>21</sup> Assigning only this limited

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<sup>18</sup> See Handler Letter at p.2. In 1994, the planned time for expansion was the first quarter of 1995. See NPRM at para. 48. The first part of the CIC expansion plan envisioned separating Feature Group B CICs from Feature Group D CICs and expanding Feature Group B CICs and CACs. See Handler Letter at p. 1.

<sup>19</sup> See Handler letter at p.2.

<sup>20</sup> See Long Distance Carrier Code Assignments, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, August 1995 (August 1995 Long Distance Carrier Code Assignments) at 3.

<sup>21</sup> See Handler Letter; Bellcore Expansion Document at Section 1, p.2. When the transition ends, only four digit CICs will be used and all CACs will be seven digits. The Handler Letter discusses the code conflict issue in the context of five-digit and seven-digit CACs. For purposes of simplicity, we have described the issue in the context of three digit and four digit CICs. Three digit and four digit CICs are pertinent both for CAC dialing and

number of four digit CICs during the transition is necessary to avoid a code conflict in which calls would be misrouted. Some switches are programmed only to receive three digit CICs, and therefore, only to accept the first three digits received. If three digit and four digit CICs beginning with the same number were transmitted to such switches, calls made using four digit CICs would be misrouted because the last digit would not be translated. During the transition, if a switch programmed only to accept three digit CICs receives a four digit CIC beginning with a "5," the switch will reject the number as a misdial because, due to Bellcore's decision not to assign three digit CICs in the 5XX and 6XX range, the switch is not programmed to accept such a code. When the transition ends, only four digit CICs will be used and all CACs will be seven digits. Also, at that time, more CICs will be available for assignment, because four digit Feature Group D CICs outside the 5XXX and 6XXX range may be assigned.

8. Conservation measures also have been, and continue to be, used to manage CIC availability.<sup>22</sup> In late February 1995, Bellcore informed the Bureau of an unusual and rapid increase in the demand for Feature Group D CICs, and sought Bureau assistance to slow CIC consumption. In March 1995, Bellcore again expressed concern about the rapidly growing demand for four digit CICs.<sup>23</sup> Such demand, according to Bellcore, could force a significantly shortened transition.<sup>24</sup> Bellcore suggested that the Commission alleviate the pressure by limiting assignment of new Feature Group D CICs to one per entity. On March 17, 1995, the Bureau directed Bellcore to limit CIC assignments to one three or four digit Feature Group D CIC per applicant until such time as the Bureau could conduct a full investigation to identify

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for presubscription.

<sup>22</sup> In 1989 conservation guidelines were adopted by the ICCF to conserve the remaining three digit CICs. These measures were triggered when the 700th three digit CIC was assigned in March 1989. The ICCF limited the number of CICs an applicant may be assigned to one (supplemental CICs were not allowed). ICCF CIC Administrative Guidelines issued in 1992 state the industry's intent to discontinue the 1989 conservation measure upon the introduction of four digit FGD CICs: "[w]ith the introduction of four digit CICs and the expansion of the CIC pool to include . . . 10,000 FGD CICs, a maximum of . . . 6 FGD CICs will be assigned per entity." See ICCF CIC Administrative Guidelines, Attachment B, ICCF 92-00726-002 (1992) (CIC Administrative Guidelines, 1992) at para. 4.3 and 7.2 See also CIC Assignment Guidelines, September 1996 at para. 3.1. Therefore, the industry's conservation measures introduced in March 1989 did not apply to four digit CICs, which were introduced in the fourth quarter of 1994. For four digit FGD CICs, industry guidelines allowed for assignment of up to six per entity. The Industry guidelines do not describe conservation plans for four digit CICs, but state that the NANP administrator will monitor their assignment and report its findings to the industry to enable the industry to determine the need for formal conservation measures. See CIC Administrative Guidelines, 1992 at para. 7.3; CIC Assignment Guidelines, September 1996 at para. 7.2.

<sup>23</sup> See Letter from Ronald R. Conners, Director of North American Numbering Plan Administration to Kathleen B. Levitz, Deputy Bureau Chief, Common Carrier Bureau, dated March 6, 1995.

<sup>24</sup> See id. at 1.

the reasons for the precipitous increase in CIC demand.<sup>25</sup>

9. On September 26, 1995,<sup>26</sup> the Bureau modified the conservation plan to permit a carrier to apply to Bellcore for one additional four digit CIC that it could use in the presubscription process in any state that mandates intraLATA presubscription. Subsequently, the NANP administrator responded, asking: (1) for clarification of the Bureau's modification; and (2) that the Bureau revisit the limit on CIC assignments as soon as the extraordinary demand for CICs ends.<sup>27</sup> The Bureau, in a letter dated October 23, 1995, emphasized that Bellcore should assign only four digit CICs, drawn from the 5XXX to 6XXX range.<sup>28</sup> The Bureau noted that this policy would remain in effect until it commences a future rulemaking to address certain CIC issues and that "eliminating the limits on the number of CIC codes an entity can receive appears premature at this time."<sup>29</sup> In reaching this conclusion, the Bureau noted the current lack of "safeguards or rules to protect against entities making extraordinary demands on the range of four digit CICs with the first digit "5" or "6" and on the few remaining three digit CICs."<sup>30</sup>

10. Carriers, equipment owners, callers, and equipment manufacturers are affected by the expansion of CICs from three to four digits and CACs from five to seven digits. In order to prepare themselves for CIC expansion, equipment owners and carriers must reprogram switch software, and may, in addition need to upgrade switch hardware. Reprogramming switch software refers to the process by which software is modified to

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<sup>25</sup> See Letter from Kathleen M.H. Wallman, Chief, Common Carrier Bureau, Federal Communications Commission, to Ron Conners, Director of NANP Administration, dated March 17, 1995 (March 17, 1995 Common Carrier Bureau Letter). As noted above, on April 1, 1995, the permissive dialing period commenced. On April 10, 1995, Bellcore suggested that the conservation plan be maintained until the end of the transition. Bellcore expressed concern that if the conservation plan was discontinued, all CICs in the current pool would be assigned before the end of the permissive dialing period as the CIC Assignment Guidelines (see footnote 1, supra) allowed for up to six four digit CICs per entity. See Letter from Ronald R. Conners, Director of NANP Administration to Kathleen Levitz, Deputy Chief, Common Carrier Bureau, Federal Communications Commission, dated April 10, 1995. Industry guidelines refer to and define "entity." We use the terms "entity" and "applicant" interchangeably.

<sup>26</sup> See Letter from Kathleen M. H. Wallman, Chief, Common Carrier Bureau, Federal Communications Commission, to Ronald R. Conners, NANP Administration, dated September 26, 1995.

<sup>27</sup> See Letter from Ronald R. Conners, to Kathleen M. H. Wallman, dated October 2, 1995; see also Letter from Jim Deak, NANP Administration to Mary De Luca, Common Carrier Bureau, Network Services Division, Federal Communications Commission, dated October 10, 1995.

<sup>28</sup> See Letter from Kathleen M. H. Wallman, Chief, Common Carrier Bureau, Federal Communications Commission, to Ronald R. Conners, NANP Administration, dated October 23, 1995 (October 23 Bureau Letter) at 1.

<sup>29</sup> Id. at 1-2.

<sup>30</sup> Id. at 1.

recognize four digit CICs and seven digit CACs. Upgrading switch hardware refers to the process by which hardware is either replaced by or expanded with increased memory to contain additional digits. Where upgrading is necessary, it must occur concurrently with reprogramming. In addition, carriers must educate callers about the need to dial seven digit CACs, and callers must be prepared to do so. Equipment manufacturers must develop and provide software and hardware to equipment owners and carriers to enable them to reprogram switch software and hardware as described above. In addition equipment manufacturers must educate their customers about the necessary changes.<sup>31</sup>

### III. DISCUSSION

#### A. Jurisdiction

11. The Communications Act gives the Commission exclusive jurisdiction over "those portions of the North American Numbering Plan that pertain to the United States."<sup>32</sup> The NANP, in addition to conventional ten-digit telephone numbers, includes other types of numbering resources, including carrier access codes (e.g., 10XXX).<sup>33</sup> CICs, which are embedded in a carrier access code, are an integral part of telephone call routing and are essential to the "efficient delivery of interstate and international telecommunications services."<sup>34</sup> The Commission, therefore, under the Act, has exclusive jurisdiction over the assignment and use of these codes in the United States.

#### B. Length of the Transition

##### 1. Background

12. In the NPRM, the Commission noted the need for a permissive dialing period in which subscribers can use both three and four digit Feature Group D CICs.<sup>35</sup> The Commission stated that the industry has been unable to agree on the length of such a period.<sup>36</sup>

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<sup>31</sup> Throughout the remainder of this Second Report and Order we analyze the affect of our decision to end the transition on January 1, 1998, on carriers, equipment owners and callers. Because the results of a recent survey of equipment manufacturers (see paras. 38-43, infra.) indicate that the hardware and software necessary for expansion to four digit CICs have already been manufactured, we exclude manufacturers from the analysis.

<sup>32</sup> See 47 U.S.C. § 251(e)(1).

<sup>33</sup> See Proposed 708 Relief Plan and 630 Numbering Plan Area Code by Ameritech-Illinois, 10 FCC Rcd 4596, n.3 (1995) (Ameritech Order).

<sup>34</sup> Id. at para. 13.

<sup>35</sup> See NPRM at para. 51.

<sup>36</sup> See id.

The NANP administrator, facing a lack of industry consensus on the issue, chose an eighteen-month transition, to begin in the third quarter of 1993 and to end in the second quarter of 1995.<sup>37</sup> Tentatively concluding that a longer period would reduce, or even eliminate hardships on payphone providers, manufacturers, and PBX users, the Commission, in the NPRM, proposed a six-year transition.<sup>38</sup> We also noted that a longer permissive dialing period could extend the life of existing equipment that may otherwise need to be retired.<sup>39</sup>

13. In the NPRM, the Commission also tentatively concluded that the plan to expand Feature Group D CICs from three to four digits is reasonable.<sup>40</sup> The Commission stated that the expansion plan "appropriately reflects our policy that access should be provided to all purchasers [customers] without discrimination."<sup>41</sup> The Commission noted that expansion of the current supply of Feature Group D CICs would make access to the public switched telephone network easier for long distance carriers and subscribers alike and thus would support "our nation's continued economic growth."<sup>42</sup> Only one commenter, VarTec, a long distance resale carrier, challenged the Commission's tentative conclusion that the expansion plan is reasonable. VarTec suggests that the Commission require reclamation of unused three digit CICs.<sup>43</sup> Sprint, although it did not oppose the NPRM's tentative conclusion on the expansion plan, also suggests that the Commission require CIC reclamation.<sup>44</sup>

14. In the April 30, 1996 Public Notice in this docket, we requested further comment to refresh the record. Seeking further comment specifically on the length of the transition, we directed commenters only to update factual information in light of the following significant events that have occurred since the record closed: (1) the assignment of exclusively four digit Feature Group D CICs, which triggered the start of the transition; (2) an unexpected increase in the demand for CICs, due to the industry's new uses for codes; (3) an even greater demand for CICs accompanying the anticipated increase in carriers entering the market as a result of the 1996 Act amendments to the 1934 Act; and (4) local exchange

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<sup>37</sup> See Handler Letter at p. 2.

<sup>38</sup> See NPRM at para. 54.

<sup>39</sup> See id.

<sup>40</sup> Id. at para. 50.

<sup>41</sup> Id.

<sup>42</sup> Id. at para. 45.

<sup>43</sup> VarTec Comments at 4. Reclamation refers to carriers returning unused CICs to the NANP administrator for reassignment to another entity.

<sup>44</sup> Sprint Reply Comments at 11.

carriers' dialing parity obligations imposed by Section 251 of the Act.<sup>45</sup>

## 2. Comments<sup>46</sup>

15. Commenters favor different periods for the transition for Feature Group D CIC expansion. Suggesting that such a period will lessen the burdens of the transition to the new format, many commenters support the six-year period proposed by the Commission.<sup>47</sup> Commenters supporting that period, as well as periods of greater duration, cite the need for equipment owners and carriers to modify equipment,<sup>48</sup> for carriers to avoid customer confusion,<sup>49</sup> for equipment manufacturers to incorporate seven-digit CAC capability in their equipment,<sup>50</sup> for callers to become accustomed to dialing extra digits,<sup>51</sup> for smaller companies to, for example, complete expensive software modifications,<sup>52</sup> and for independent public payphone providers to program their payphones.<sup>53</sup> Some parties suggest that the transition should be extended as long as twelve years.<sup>54</sup>

16. AT&T estimates that the cost to Lucent's PBX customers to purchase and implement software and hardware modifications would range up to \$15,000 for each PBX, depending on the type and age of the equipment. According to AT&T, it would take six

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<sup>45</sup> See Public Notice at 1.

<sup>46</sup> We refer to comments and replies to the NPRM as "Comments" or "Reply Comments," respectively. We refer to comments and replies to the Public Notice as "PN Comments" and "PN Reply Comments," respectively.

<sup>47</sup> See, e.g., NCS Comments at 7; OPASTCO Comments at 5; Alarm Industry Communications Committee (AICC) Reply Comments at 3; CSCN Comments at 2; CompTel PN Reply Comments at 1.

<sup>48</sup> See AT&T PN Comments at 3; AT&T Comments at 8 (citing needs of equipment owners); Telco PN Comments at 6 (citing needs of carriers). See para. 10, supra for a discussion of entities affected by CIC expansion and of what is needed to modify equipment, both through software reprogramming and hardware upgrading.

<sup>49</sup> See VarTec PN Comments at 1.

<sup>50</sup> See North American Telecommunications Association (NATA) Comments at 10 (stating the need to ensure that CPE manufacturers have adequate opportunity to incorporate this capability). CPE includes PBXs. NATA is now known as the MultiMedia Telecommunications Association (MMTA). See paras. 40-41, infra for discussion of information received from MMTA and its members.

<sup>51</sup> The American Public Communications Counsel (APCC) argues that users of pay telephones are the most likely to use CACs and that a twelve-year transition should help maximize customer education. See APCC Comments at 4.

<sup>52</sup> See GVNW Comments at 3.

<sup>53</sup> See APCC Reply Comments at 2.

<sup>54</sup> See, e.g., Telco PN Comments at 6 (suggesting 12 years as a minimum); APCC Comments at 4.

years or more for PBXs to be upgraded or replaced so that they recognize expanded CICs.<sup>55</sup>

17. VarTec, advocating twelve years as a minimum transition, argues that a longer period may lessen the possibility that customers will no longer use CACS to access IXCs,<sup>56</sup> and is necessary for smaller IXCs who will require a longer consumer education period. VarTec also suggests that IXCs currently using CICs should be "grandfathered"<sup>57</sup> from expansion, and that the new seven digit CACs, rather than replacing the five digit CACs, should "supplant" them.<sup>58</sup> Opposing grandfathering, GTE asserts that it would "trample any notion of dialing parity."<sup>59</sup> GTE also asserts that it is not technically possible to establish a "two-tier" CIC system.<sup>60</sup> GTE states that transition must end when the last of the four digit Feature Group D CICs in the 5XXX and 6XXX range has been assigned.<sup>61</sup>

18. GVNW Inc./Management (GVNW) supports a six-year exemption from conversion obligations for smaller, rural telephone companies, in addition to the proposed six-year permissive dialing period.<sup>62</sup> GVNW claims that the switches of smaller LECs generally do not have the most recent software upgrades, which are very costly<sup>63</sup> and at times exceed the cost of switch replacement.<sup>64</sup> The Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO),<sup>65</sup> which represents more than 440 independently owned and operated telephone companies serving rural areas, supports a six-

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<sup>55</sup> See AT&T PN Reply Comments at 7-8, n.20, citing AT&T Reply Comments on the NOI, filed January 27, 1993, at 4. See also AT&T PN Comments at 6, n.11, citing same.

<sup>56</sup> See VarTec PN Comments at 1-2; See also Telco PN Comments at 6.

<sup>57</sup> Grandfathering would exempt three digit CICs already in use from expansion to four digits, thus allowing their continued use when the transition ends and new CICs assigned are four digits.

<sup>58</sup> See VarTec Comments at 6.

<sup>59</sup> GTE Reply Comments at 9.

<sup>60</sup> Id.

<sup>61</sup> See id. See also Belcore Comments at 8.

<sup>62</sup> See GVNW Reply Comments at 1.

<sup>63</sup> See GVNW Comments at 3.

<sup>64</sup> See id. at 2. GVNW claims that many manufacturers charge LECs for each level of software update, and that the necessary software upgrades to a Northern Telecom DMS 10 switch with Series 300 software and to Siemens-Stromberg DCO switches would cost between \$150,000 and \$200,000. See id.

<sup>65</sup> OPASTCO was formerly known as the Organization for the Protection and Advancement of Small Telephone Companies.

year transition to ease the economic burdens of switch conversion.<sup>66</sup> OPASTCO suggests that the Commission, as it does with equal access requirements, refrain from requiring small companies to modify their switches until a "bona fide" request is submitted, and allow those companies at least eighteen months to comply after receiving such a request.<sup>67</sup>

19. The Alarm Industry Communications Committee (AICC) argues that the six-year period proposed by the Commission is necessary because certain alarm companies will need to engage in significant alarm panel reprogramming in order to implement the change from three to four digit CICs, and five to seven digit CACs.<sup>68</sup> AICC states that the majority of alarm panels employs an alerting device that seizes a telephone line serving protected premises and an autodialer that places a pre-programmed call to the central station over the public switched telephone network.<sup>69</sup> According to AICC, alarm panels must be individually reprogrammed, a process that requires an alarm company to arrange appointments with each affected subscriber so that alarm technicians can manually change the dialing pattern in each alarm panel installed within the protected premises.<sup>70</sup> AICC states that reprogramming must be completed in a timely fashion to avoid endangering life, safety, and property.<sup>71</sup>

20. Parties supporting a transition shorter than that proposed by the Commission cite: (1) the likelihood of assignment of all the four digit Feature Group D CICs in the 5XXX and 6XXX range in less than six years;<sup>72</sup> (2) the unfair competitive advantages for companies that customers can reach by dialing five digit CACs instead of seven digit CACs; and (3) the inability of local exchange carriers to satisfy the dialing parity requirement in Section 251(b)(3) as long as differences in CIC and CAC lengths put carriers on unequal footing with each other.<sup>73</sup>

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<sup>66</sup> See OPASTCO Comments at 1, 5-6.

<sup>67</sup> *Id.* at 5-6.

<sup>68</sup> See AICC Reply Comments at 3. AICC, representing over 90 percent of the alarm securities provided throughout the United States, is a subcommittee of the Central Station Alarm Association. See *id.* at 1.

<sup>69</sup> See *id.* at 1-2.

<sup>70</sup> See *id.* at 2.

<sup>71</sup> See *id.*

<sup>72</sup> Some parties state that the close of the transition, rather than being defined by a specific number of months, is necessarily triggered by the assignment of all 2000 four digit CICs in the 5XXX and 6XXX range. See, e.g., Ameritech Reply Comments at 7-8; GTE Comments at 17; SBC Comments at 14; US WEST Comments at 15; Pacific Comments at 11; USTA Comments at 10-11; Bellcore Comments at 8.

<sup>73</sup> See, e.g., BellSouth Public Notice (PN) Comments at 3; Cincinnati Bell PN Comments at 3; NYNEX PN Comments at 3; U S WEST PN Reply Comments at 1-2; SBC PN Reply Comments at 2. In an April 25, 1996 *ex parte* letter filed with the Commission, US WEST raised concerns that access codes of differing lengths violate the

21. Parties arguing for a shorter transition propose that the transition end on dates that range from December 31, 1996, to March 31, 1998.<sup>74</sup> U S WEST believes that a six-month phase-out would allow adequate time for customer education.<sup>75</sup> US WEST maintains that most networks are already equipped to accept four digit CICs and that modification of older equipment and installation of new equipment has already been undertaken, thus necessitating only translation changes for trunk groups and switching equipment.<sup>76</sup> GTE, disagreeing with AT&T's contention that a six-year transition is necessary because the conversion to four digit CICs will require "an extensive modification effort at significant cost," argues that AT&T has neither provided facts to support its cost estimates nor given any indication as to the company's efforts over the last two years.<sup>77</sup>

22. Opponents of a lengthy transition argue that it would be costly (particularly regarding customer education)<sup>78</sup> and would "prolong the lack of dialing parity between embedded Feature Group D providers and new service providers."<sup>79</sup> US WEST argues that a six-year transition would award incumbent IXCs an unfair advantage, to the detriment of both new entrants and consumers.<sup>80</sup> US WEST bases its argument both on the dialing parity requirement of Section 251(b)(3) and on its view that continued use of both formats violates the Commission's statement in the Ameritech Order that "successful administration of the NANP will not unduly favor or disadvantage any particular industry segment or group of consumers."<sup>81</sup> Further, US WEST suggests that the Commission's proposal for a six-year transition violates the prohibition against unreasonable discrimination in Section 201(b) of the

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dialing parity requirements of the 1934 Act, as amended. See Carrier Identification Codes (CICs) and Dialing Parity, US WEST, Inc. on Behalf of US WEST Communications and US WEST Media Group, CC Docket No. 92-237, April 25, 1996.

<sup>74</sup> See, e.g., GTE PN Comments at 3 (December 31, 1996); SBC PN Comments at 4 (December 31, 1996); US WEST PN Reply Comments at 3 ("end of 1996"); BellSouth PN Comments at 2 (December 31, 1997); NYNEX PN Comments at 4 (6 months but no later than April 1, 1997); Cincinnati Bell PN Comments at 1 (one year from the date of enactment of the 1996 Act amendments to the 1934 Act); Sprint PN Reply Comments at 2 (March 31, 1998).

<sup>75</sup> See US WEST PN Comments at 8-9.

<sup>76</sup> See US West PN Comments at 8. "Translation" refers to the conversion of digits dialed by a subscriber to codes and protocols that are recognized and used by switches to complete the subscriber's call.

<sup>77</sup> GTE PN Reply Comments at 2, quoting AT&T PN Comments at 6.

<sup>78</sup> See BellSouth Comments at 13.

<sup>79</sup> Id. See also GTE Comments at 20; SBC Reply Comments at 11.

<sup>80</sup> See US WEST PN Comments at 6.

<sup>81</sup> Id. at 7, quoting Ameritech Order, 10 FCC Rcd at 4604.

1934 Act.<sup>82</sup> Bell Atlantic disagrees with U S WEST's assertion that the existence of access codes of differing lengths during the transition may violate the dialing parity requirements of the Act. Bell Atlantic asserts that the Act's definition of dialing parity does not address the issue of differing lengths of access codes but rather the need to dial an access code in the first instance.<sup>83</sup> Both NYNEX and SBC, however, contend that placing providers of telephone service "on equal footing with respect to CAC dialing" is necessary for full dialing parity.<sup>84</sup>

23. Some commenters support the shorter 18-month period proposed by Bellcore.<sup>85</sup> Bell Atlantic contends that there is no need for a transition longer than two years, particularly because the industry's expansion plan has already been known for six years.<sup>86</sup>

24. AirTouch suggests a maximum period of three years because of the need for competing carriers to achieve parity and for equipment providers to upgrade PBX's to accommodate expansion.<sup>87</sup> Arguing that it provides sufficient time for carriers to implement new codes in the network and for customer education, Ameritech also supports a three-year transition.<sup>88</sup> Ameritech argues that simultaneous use of both three digit and four digit CICs is confusing to customers and places carriers and customers required to use four digit CICs at a disadvantage. Ameritech states that during a transition, LECs must maintain two translation tables in all switches -- one for the four digit CICs and one for the three digit CICs -- which also creates added administrative burdens.<sup>89</sup>

25. Several commenters suggest alternatives to the Commission's prescribing the transition's duration.<sup>90</sup> Sprint, while agreeing with the Commission that a multi-year transition is needed, suggests that it is premature to set a specific date for its end because the amount of customer education and equipment reprogramming that will be needed is unknown. Instead, Sprint suggests that the Industry Numbering Committee (INC) should conduct an end-user survey "regarding the subscribers' perceptions about the meaning and length of dialing

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<sup>82</sup> Id. at 7, n.15.

<sup>83</sup> See Bell Atlantic PN Comments at 1-2, citing 47 U.S.C. §153(15) (definition for dialing parity).

<sup>84</sup> See SBC PN Reply Comments at 2, quoting NYNEX PN comments at 3.

<sup>85</sup> See, e.g., NYNEX Comments at 15; BellSouth Comments at iii; Pacific Comments at 11.

<sup>86</sup> See Bell Atlantic Reply Comments at 2.

<sup>87</sup> See AirTouch Comments at 8. See also, Allnet Comments at 1.

<sup>88</sup> See Ameritech Comments at 7.

<sup>89</sup> Id. at 7-8.

<sup>90</sup> See, e.g., Ameritech Reply Comments at 8; AT&T Comments at 7; MCI Reply Comments at 14-15; SBC Reply Comments at 11.

arrangements.<sup>91</sup> Ameritech suggests that the NANP administrator monitor CIC demand, and then, at an agreed upon time, advise the industry to implement the transition.<sup>92</sup> In the event the Commission decides to choose a specific period, Ameritech suggests that the Commission direct the industry to develop a "usage monitoring plan" that will ensure that the transition occur before the last available CICs in the 5XXX and 6XXX range are assigned.<sup>93</sup> While MCI does not propose a length for the transition, it acknowledges the limited supply of CICs in the 5XXX and 6XXX ranges, and suggests that the Commission "discourag[e] the use of CICs for purposes other than those intended in the industry guidelines."<sup>94</sup> MCI cautions that the industry should not "treat[] CICs as a miscellaneous numbering resource, available for any purpose."<sup>95</sup>

26. While the Public Notice did not seek comment on the current conservation plan's limitation on CIC assignments to one per applicant, several commenters suggest that the conservation plan end, either immediately<sup>96</sup> or soon.<sup>97</sup> BellSouth, for example, cites the need for additional CICs for legitimate business use.<sup>98</sup> GTE asserts that companies possessing multiple CICs have a competitive advantage over new providers that are limited to one CIC assignment.<sup>99</sup> Pacific contends that a limit on CIC assignments could impede service deployment wherever such service depends on a distinct CIC.<sup>100</sup> AT&T contends that the Commission should not be concerned that the need to use CICs to identify local service providers will speed the consumption of CICs if the conservation plan were ended because the INC recently reached agreement not to assign CICs for identification of local service

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<sup>91</sup> Id. at 14.

<sup>92</sup> Ameritech Reply Comments at 8.

<sup>93</sup> Id.

<sup>94</sup> MCI PN Comments at 3.

<sup>95</sup> MCI PN Comments at 2-3. GTE, in its reply comments, concurs that the Commission should discourage uses of CICs that would deplete the remaining four digit CICs in the 5XXX and 6XXX range. See GTE PN Reply comments at 4.

<sup>96</sup> See, e.g., US WEST PN Reply Comments at 2; AT&T PN Reply Comments at 5.

<sup>97</sup> See e.g., SBC PN Comments at 4; GTE PN Comments at 4.

<sup>98</sup> See BellSouth PN Comments at 5, citing Letter from Ronald R. Connors, Director, NANP Administration, to Kathleen M.H. Wallman, Chief, Common Carrier Bureau (October 2, 1995) which states that the "tariffs that caused the extraordinary CIC demands in March are currently not in effect."

<sup>99</sup> See GTE PN Comments at 3.

<sup>100</sup> See Pacific Telesis PN Comments at 3.

providers.<sup>101</sup> AT&T contends that, to the extent that a numeric code is needed to identify local service providers (as it may be for implementation of local number portability), that code will come from a separate resource.<sup>102</sup> No other parties filing comments in response to the Public Notice addressed this issue. AT&T, relying on assignment data beginning on April 1, 1996, argues that if the conservation plan is discontinued, even with a six-year transition as initially proposed by the Commission, available CICs would remain for seven additional years.<sup>103</sup> Bellcore, in its comments to the NPRM, recommends that the "current conservation limit of one FGD CIC assignment per entity be retained until the industry has developed these [conservation] measures."<sup>104</sup>

### 3. Decision

27. We determine that the transition for the conversion from three digit Feature Group D CICs to four digit Feature Group D CICs will end on January 1, 1998. Because of changes occurring since the record in this docket closed in 1994, we conclude that the transition should end as soon as practicable. We are confident that, as discussed below, the use of only four digit Feature Group D CICs will serve the pro-competitive goals of the Act, as well as the specific objectives of Sections 251(e) and 251(b)(3). A shorter transition will allow us to end sooner the conservation plan which, as modified below, limits to two the number of CIC assignments per eligible applicant and removes the condition that second CICs be used only in connection with providing intraLATA toll services. As discussed below, we conclude that extending the transition until January 1, 1998, gives carriers and equipment owners a reasonable period to complete upgrading their equipment and educating their customers about the change from three digit Feature Group D CICs to four digit Feature Group D CICs.

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<sup>101</sup> See AT&T PN Comments at 8-9, citing INC Issue Identification Form, Issue No. 72, Service Provider Identification for Local Network Interconnection (December 15, 1995).

<sup>102</sup> See id.

<sup>103</sup> These data from the North American Numbering Plan Administrator show that as of April 1, 1996, 306 four digit codes have been assigned, leaving 1,694 of the 2,000 codes available to support permissive dialing during the transition. See AT&T PN Comments at 8. In its comments to the NPRM, AT&T, disagreeing with parties arguing that the 2,000 four digit CICs in the 5XXX and 6XXX range will all be assigned in fewer than 6 years, argued that none of those parties provides support for their claims. According to AT&T, "even Bellcore acknowledges that at the current rate of assignment, the initial supply of codes would last 11 years." AT&T Reply Comments at 8-9, citing Bellcore Comments at 8.

<sup>104</sup> Bellcore Comments at 8. Bellcore refers to the FCC's recommendation to use the industry forum process to make changes to existing conservation measures in order to ensure an adequate transition. Id. Bellcore states: "[u]nder conservation rules in effect since March, 1989, NANPA assigns only one FGD CIC per entity. As specified in the CIC guidelines, when FGD CICs are expanded to 4 digits (currently projected to be during the first quarter 1995), this limit will increase to 6 FG CICs per entity, which will result in a substantial but undetermined increase in demand." Id.

28. We also affirm our tentative conclusion that the industry's plan to expand three digit Feature Group D CICs to four digit Feature Group D CICs is reasonable. As noted above, the expansion plan has already begun and four digit CICs are now being issued. As the total number of Feature Group D CIC assignments shows, the demand for these CICs has been increasing since we issued the NPRM in 1994.<sup>105</sup> The number of CICs available for assignment must increase to accommodate this demand. Using codes of increased length is the only reasonable means of making more CICs available.<sup>106</sup> We recognize that if the transition from three to four digit CICs is not well managed, the expansion may result, as VarTec suggests, in increased customer confusion, dialing time, dialing errors, and significant expense. We conclude, however, that VarTec's suggestion that we reclaim three digit Feature Group D CICs as an alternative to replacing them with four digit Feature Group D CICs<sup>107</sup> is not a plausible long-term solution. Although reclamation of three digit CICs may provide some short-term relief, the total number of available three digit Feature Group D CICs would continue to be less than one thousand.<sup>108</sup>

29. Statutory Considerations. Section 251(e) of the Act, in addition to granting the Commission jurisdiction over those portions of the NANP that pertain to the United States, also requires the Commission to ensure that numbers are "available on an equitable basis."<sup>109</sup> Our modifications to the conservation plan and our determination to end the transition as soon as practicable, thus allowing for a full conversion to four digit Feature Group D CICs, are consistent with that statutory obligation. Our determinations not only respond to possible hardships, such as costs and timing of conversion to four digit CIC capability, on small business entities but also will promote the competitive objectives of the Act.<sup>110</sup>

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<sup>105</sup> Feature Group D CIC assignments totalled 796 by the fourth quarter of 1993, 947 by the fourth quarter of 1994, 1,209 by the fourth quarter of 1995, and 1,299 by the second quarter of 1996. See Long Distance Carrier Code Assignments, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission (Oct 1996) at Table 1.

<sup>106</sup> According to Bellcore, the four digit Feature Group D CIC format can provide the industry with 9,798 CICs. See Letter from Ron Conners, Director of NANP Administration, to Elizabeth Nightingale, Federal Communications Commission, Common Carrier Bureau, dated December 17, 1996 (Bellcore December 17, 1996 Letter) at 1.

<sup>107</sup> See para. 13, supra.

<sup>108</sup> According to Bellcore, the three digit Feature Group D CIC format can only provide the industry with 969 CICs. See Letter from Nancy K. Fears, NANP Administration, to Octavia Florence of the Common Carrier Bureau, Dated July 9, 1996. Therefore, a maximum of 969 three digit CICs are available for all members of the industry, and reclamation will not increase this number.

<sup>109</sup> 47 U.S.C. § 251(e).

<sup>110</sup> The transition to the use of only four digit CICs also will serve the goal of Section 257 of the Act, by reducing barriers to entry of new small carriers and perhaps other small entities. See 47 U.S.C. § 257. The Commission issued a Notice of Inquiry in May 1996 to begin implementing Section 257. See In the Matter of Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses, Notice of Inquiry,

30. Parties seeking an end to the conservation plan have argued that the plan disadvantages those entities that were unable to secure multiple CICs prior to the plan's inception. Because the CIC conservation plan limits entities to no more than two CICs, the conservation plan presents the possibility that some entities may be unable to use CICs for as many purposes as those entities who were assigned multiple CICs prior to inception of the conservation plan.<sup>111</sup> New entrants, in particular, may be unable to perform various functions in the same manner as carriers who use multiple CICs for the same services. Nonetheless, the conservation plan, as modified, is necessary as long as the transition continues because abolishing the conservation plan during this period would likely cause rapid depletion of unassigned four digit CICs in the 5XXX and 6XXX range and necessitate a flash-cut conversion to four digit codes. A sudden shift to four digit codes could be particularly detrimental to smaller carriers and equipment owners who could be required to modify or replace their systems to support four digit CICs. A flash-cut conversion would give no warning to those members of the industry who have yet to prepare their equipment, switches and networks for the conversion and no warning to callers that they may no longer dial five digit CACs, but instead must dial seven digit CACs. For these reasons, we find any disadvantages resulting from continuation of the conservation plan to be less burdensome than the harm of a flash-cut conversion. Although AT&T states that the INC recently reached agreement not to assign CICs to identify local service providers,<sup>112</sup> the decision not to use CICs for this purpose would not necessarily slow CIC consumption enough to enable us to end the conservation plan earlier than January 1, 1998. Likewise, AT&T does not provide adequate support for its argument in its comments to the Public Notice that if the conservation plan were discontinued, available CICs would remain for seven additional years.<sup>113</sup> AT&T, in making this argument, relies on Bellcore assignment data from April 1, 1996, at which time the conservation plan had been in place for over a year. Neither does AT&T's reliance in its comments to the NPRM on Bellcore's statement that the supply of CICs would last 11 years provide that support.<sup>114</sup> Comments in response to the NPRM were filed in 1994, and although they were filed at a time in which there was no conservation plan in place, they were also filed prior to enactment of the 1996 Act amendments to the 1934 Act. Therefore, those predictions did not consider the possibility of an increase in new entrants into the telecommunications services market as a result of those amendments to the Act.

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GN Docket No. 96-113, 11 FCC Rcd. 6280 (1996). See Final Regulatory Flexibility Analysis, Appendix C, for a discussion and definition of small business entities.

<sup>111</sup> For examples of multiple uses, see footnote 9, supra.

<sup>112</sup> See para. 26, supra.

<sup>113</sup> See id.

<sup>114</sup> See footnote 103, supra.

31. We modify the conservation plan as follows:

- Entities with only one Feature Group D CIC assignment (whether it is a three digit CIC or a four digit CIC),<sup>115</sup> and who are currently ineligible to receive another CIC, may apply for and receive a second CIC;
- An entity that has no CICs upon the effective date of this Second Report and Order may apply for and receive two four digit Feature Group D CICs;
- Each entity that had only one CIC, and received an additional CIC under the intraLATA presubscription exception to the conservation plan,<sup>116</sup> may decide itself how it will use its second CIC;
- Entities with two or more CICs (whether they are three digits or four digits), may not receive any additional CICs; and
- Bellcore may assign only four digit Feature Group D CICs.

We modify the conservation plan to lessen the disadvantage the plan imposes on competing providers, which may include small business entities.<sup>117</sup> The ability to have access to two CICs should be of particular benefit to smaller entities currently entering the telecommunications services market in their effort to compete with established carriers. The Commission, through the NANP administrator, will closely monitor CIC consumption under the modified conservation plan. If it appears that the supply of CICs in the 5XXX and 6XXX range is in jeopardy of being depleted before January 1, 1998, the Commission may impose new conservation measures. We direct the Common Carrier Bureau to modify the conservation plan as needed to respond to changes in CIC consumption under its delegated authority.

32. US WEST contends that the dialing disparity between three and four digit CICs, which persists during the transition, violates the prohibition in the Act against unreasonable discrimination. We note that, during any transition, because customers of some carriers may need to dial seven digit CACs while those of other carriers may dial five digit

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<sup>115</sup> Based on Bellcore's July 1996 CIC distribution list, we estimate that there currently are approximately 941 entities with only one Feature Group D CIC assignment (either a three or four digit CIC). See Bellcore's July 1, 1996, Carrier Identification Code Distribution List. Based on calculations by Common Carrier Bureau staff analyzing data in Bellcore letters, we estimate that there are approximately 1,693 four digit Feature Group D CICs available for assignment during the transition (those in the 5XXX and 6XXX range). See Fears June 26, 1996 Bellcore Facsimile Cover Sheet to Octavia Florence of the Common Carrier Bureau (Bellcore June 26, 1996 Facsimile).

<sup>116</sup> See para. 9, supra.

<sup>117</sup> See Local Competition Second Report and Order at para. 101.

CACs, there will be disparity. We find, however, that the transition does not violate Section 201(b)'s prohibition against unreasonable practices or Section 202(a)'s prohibition against unreasonable discrimination. The transition is reasonable and necessary to avoid a flash-cut conversion to four digit CICs which would be contrary to the public interest.<sup>118</sup> We also conclude, however, that we should end the transition as soon as practicable to lessen any negative effects of the disparity that exists during the transition.<sup>119</sup>

33. Our decisions to modify the conservation plan and end the transition as soon as practicable also are consistent with the duty imposed on all LECs in Section 251(b)(3) to "permit all . . . [competing providers of telephone exchange service and telephone toll service] to have nondiscriminatory access to telephone numbers."<sup>120</sup> Our actions to modify the conservation plan and end the transition as soon as practicable are intended to lessen any hardships that might result from the conservation plan's limiting access to CICs and to the services that access to multiple CICs makes possible.<sup>121</sup>

34. Several parties argue that the existence of CICs and CACs of varying lengths during the transition violates the dialing parity requirement in the Act, as amended.<sup>122</sup> Section 251(b)(3) requires that all local exchange carriers "provide dialing parity to competing providers of telephone exchange service and telephone toll service. . . ."<sup>123</sup> The Act defines "dialing parity" to mean that:

a person that is not an affiliate of a local exchange carrier is able to provide telecommunications services in such a manner that customers have the ability to route automatically, without the use of any access code, their telecommunications to the telecommunications services provider of the customer's designation from among 2 or more telecommunications services providers (including such local exchange carrier).<sup>124</sup>

Thus, the dialing parity requirement of Section 251(b)(3) extends only to calls made on a

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<sup>118</sup> See discussion in para. 30, *supra*.

<sup>119</sup> We note that the United States Court of Appeals for the D.C. Circuit has recognized agency flexibility to implement a transitional process in its regulatory policies. See *Rural Telephone Coalition v. FCC*, 838 F.2d 1307, 1315 (D.C. Cir. 1988).

<sup>120</sup> 47 U.S.C. § 251(b)(3).

<sup>121</sup> See para. 31, *supra*.

<sup>122</sup> See para. 22, *supra*.

<sup>123</sup> 47 U.S.C. §251(b)(3).

<sup>124</sup> 47 U.S.C. §153(15).

presubscribed basis; it does not govern the number of digits subscribers must dial to reach carriers to which they are not presubscribed (*i.e.*, CAC dialing). Therefore, although CICs are used for access, the existence of CICs with different numbers of digits during the transition does not violate the Act's dialing parity requirement.<sup>125</sup> We agree with Bell Atlantic that the dialing parity provision of the Act "simply does not reach the issue of access codes of different lengths."<sup>126</sup> Notwithstanding this finding, and although in paragraph 31, *supra*, we find that the transition does not violate Section 201(b)'s prohibition against unreasonable practices or Section 202(a)'s prohibition against unreasonable discrimination, we reserve the right to address discrimination under those sections of the Act under other circumstances.

35. Other Considerations. We find that continuing the transition until January 1, 1998, properly balances the competing interests of callers, carriers and equipment owners. We balance the hardships of a short transition, which may burden some carriers (perhaps smaller, rural carriers)<sup>127</sup> and some equipment owners, by requiring them to reprogram and upgrade equipment more quickly than their business plans might have projected, and callers by requiring them to learn new, longer carrier access codes more quickly, against the hardships a long transition may impose upon new entrants. We also have considered the burdens on such entities as providers of payphones, alarm companies, and small, rural carriers. We find that our decision to keep the transition in place until January 1, 1998, imposes any burdens that may occur equitably among all of the affected parties.

36. We are not persuaded that carriers, PBX equipment owners, payphone providers, alarm companies, and small, rural carriers need a transition beyond January 1, 1998. Based on the information discussed below, we are confident not only these entities, both large and small, have had reasonable notice about the need to upgrade their systems to accept four digit CICs, but also that a transition ending on January 1, 1998, provides ample time to complete the upgrades and educate callers about the change.

37. Since 1989, the industry should have been aware that it would need to replace three digit CICs with four digit CICs and five digit CACs with seven digit CACs.<sup>128</sup> Since then, the industry also should have been aware that it needed to develop the software and hardware necessary to support four digit CICs and seven digit CACs in accordance with

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<sup>125</sup> The Commission recently adopted rules addressing the issue of dialing parity and the related issue of presubscription. See Local Competition Second Report and Order at paras. 22-96. See also *id.* at Appendix B, §§ 51.5, 51.205, 51.207, 51.209, 51.211, 51.213, 51.215.

<sup>126</sup> See Bell Atlantic PN Comments at 1-2, *citing* 47 U.S.C. § 153(15) (Act's definition of dialing parity).

<sup>127</sup> We also address issues related to smaller carriers in the Final Regulatory Flexibility Analysis, Appendix C. As noted above (see footnote 31, *supra*), because the results of a recent survey of equipment manufacturers (see paras. 38-43, *infra*.) indicate that the hardware and software necessary for expansion to four digit CICs have already been manufactured, we exclude manufacturers from our analysis in this Second Report and Order.

<sup>128</sup> See para. 5, *supra*.

Bellcore's expansion plan, to upgrade or replace equipment, and to upgrade networks, either through software or hardware changes.<sup>129</sup> By January 1, 1998, the period during which carriers and equipment owners should have been aware that three digit CICs would need to be replaced will have been over eight years. Furthermore, the transition itself will have lasted almost three years.<sup>130</sup> In the NPRM, the Commission stated that "the stock of three digit codes available for assignment will likely be exhausted within a year or so . . . [and the industry's change from three to four digit Feature Group D CICs] is planned for the first half of 1995."<sup>131</sup> Therefore, since May 1994, when the Commission's NPRM was published in the Federal Register,<sup>132</sup> the industry was on notice that changes to accommodate expansion to four digit Feature Group D CICs would likely begin to be necessary in the following year. Consistent with the Commission's statement in the NPRM, the transition began on April 1, 1995,<sup>133</sup> the day after which the last three digit Feature Group D CIC was assigned, and the day on which Bellcore began to assign exclusively four digit codes. A permissive dialing period commenced during which callers could dial either five or seven digit CACs to reach their preferred carrier. PBXs that cannot recognize four digit CICs have been unable since April 1, 1995, to direct calls to carriers who have been assigned only four digit CICs. We believe, therefore, that the incentive to upgrade older PBX equipment is strong because it will enable owners of older PBXs to benefit from the services of carriers that have entered the market since April 1, 1995.

38. We have attempted to assess when equipment manufacturers (network switch manufacturers and PBX manufacturers) made available the hardware and software necessary to enable PBX owners to reprogram software and upgrade hardware and to enable carriers to do the same with network switches.

39. Regarding network switches, in order to make this assessment, Commission staff requested and received information from two manufacturers, Lucent Technologies

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<sup>129</sup> See Bellcore Expansion Document at Section 1, p.3.

<sup>130</sup> The determination that the total transition will have lasted almost three years assumes that period began on April 1, 1995, when Bellcore began assigning exclusively four digit Feature Group D CICs, and ending on January 1, 1998.

<sup>131</sup> See NPRM at para. 47-48.

<sup>132</sup> See 59 FR 24103 (May 10, 1994).

<sup>133</sup> Telco, in a footnote to its comments, contends that the transition has not commenced because "the Commission has not adopted a specific 'transition period' on the record in any final decision." See Telco PN Comments at 6, n.2. We note that Telco did not explain why the Commission must determine the beginning of the transition. Indeed, the CIC expansion plan was developed and begun by the industry. In the NPRM the Commission stated that the industry's change from three to four digit FGD CICs was planned for the first half of 1995. See NPRM at para. 48.

(Lucent)<sup>134</sup> and Northern Telecom (Nortel),<sup>135</sup> who cumulatively represent approximately 91 percent of the total United States market for local network switches, as measured by sales.<sup>136</sup> Lucent listed five network switch product units capable of processing four digit CICs that it began to offer to its customers between November 1993 and March 1994.<sup>137</sup> Nortel noted that it began making available to its customers network switches that had the capability of processing four digit CICs during the first quarter of 1994. Although Lucent did not disclose how many of its local network switch customers have purchased the newer products, Nortel states that all of its customers requiring equal access software also have the four digit CIC capability.

40. Regarding PBX systems, in addition to Lucent and Nortel<sup>138</sup> we received information from Mitel, NEC, and Hitachi Telecom.<sup>139</sup> These five companies, cumulatively, represent an average of approximately 67.4 percent of the total United States market for PBX

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<sup>134</sup> See Federal Communications Commission Request for Information from Lucent Technologies, CC Docket No. 92-237, September 25, 1996, and Federal Communications Commission Supplemental Request for Information from Lucent Technologies, CC Docket No. 92-237, October 8, 1996; Lucent Technologies Response to FCC Request for Information, dated October 4, 1996 (Lucent October 4, 1996 Filing) and Lucent Technologies Response to FCC Supplemental Request for Information, dated October 15, 1996 (Lucent October 15, 1996 Filing). Lucent was the manufacturing arm of AT&T Corp. before AT&T sold the company in the Fall of 1996.

<sup>135</sup> See Federal Communications Commission Request for Information from Nortel, CC Docket No. 92-237, October 7, 1996; Northern Telecom Response to FCC Request for Information, dated October 15, 1996 (Nortel October 15, 1996 Filing). Northern Telecom is the manufacturing subsidiary of the Canadian telecommunications conglomerate, BCE Inc.

<sup>136</sup> Lucent and Nortel, while they do not provide their own sales figures, do refer to estimates provided by Northern Business Information (NBI). Lucent states that NBI estimates that AT&T Network Systems (now Lucent) "was the leader in U.S. CO switch sales for 1994 with 46% of total sales." See Lucent October 15, 1996 Filing at 1. Nortel cites NBI to estimate that Nortel's share of the local network switch market is 45%. See Nortel October 15, 1996 Filing.

<sup>137</sup> Those product units are: 1A ESS; 2B ESS; 4ESS; 5ESS-2000; and OSPS. See Lucent October 4, 1996 Filing at 1. These switch products are used by telephone companies of varying sizes. The 2B ESS switch, for example, is used by both smaller and larger carriers serving less densely populated areas. See "Engineering and Operations in the Bell System," Bell Telephone Laboratories, pp. 420-421 (1983).

<sup>138</sup> In addition to the information solicited and received from Lucent and Nortel in October 1996, Commission Staff also solicited and received updated information from them in March 1997. See April 2, 1997 Response of Lucent Technologies to FCC request for Further Information Dated March 20, 1997 (Lucent April 2, 1997 Filing); March 31 Nortel FCC Further Information Regarding CC Docket 92-237 (Nortel March 31, 1997 Filing).

<sup>139</sup> See April 10, 1997 Mitel Response to Request for Information; March 25, 1997 NEC Response to Information (March 25, 1997 NEC Filing); April 3, 1997 Hitachi Response to Information.

equipment between 1991 and 1995, as measured by sales.<sup>140</sup> The information we received indicates that an average of 82 percent of PBX customers of equipment manufacturers representing this 67.4 percent of the PBX market currently has systems with four digit CIC capability.<sup>141</sup> A large number of the PBX customers in the 18 percent that does not yet have this capability would need only software changes to bring their systems into compliance, fewer would need both hardware and software changes, and a very small percent would need to completely replace their systems. It is noteworthy that manufacturers representing smaller portions of the PBX market (1) began selling systems with inherent four digit CIC capability much earlier than those manufacturers representing larger portions of the market; and (2) currently have higher percentages of their PBX customers with four digit CIC capable systems.<sup>142</sup> From our analysis of the responses we received to requests about costs software and hardware modifications, both in terms of system "downtime" and dollars, it appears that costs may vary greatly depending on PBX system types.<sup>143</sup>

41. In an effort to include data from smaller entities, Commission staff also requested and received information from the MultiMedia Telecommunications Association (MMTA), a trade association of approximately 500 members, 120 of which are manufacturers and the remainder of which include suppliers, distributors and users of business telecommunications equipment.<sup>144</sup> MMTA's membership includes small business entities. Hitachi, an MMTA member, filed its information through MMTA. We also received

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<sup>140</sup> See 1996 Multimedia Telecommunications Market Review and Forecast at Table III-1.6. These data come from a period (1992-1995) during which Lucent was still AT&T. The data show the following regarding average PBX sales percentages during this period: AT&T (now Lucent) (26.7 percent); Nortel (24.2 percent); Mitel (7.9 percent); NEC (6.5 percent); and Hitachi (2.1 percent).

<sup>141</sup> The information we describe below represents a compilation of information received from the filings cited above.

<sup>142</sup> Lucent (representing 26.7 percent of the market) and Nortel (representing 24.2 percent of the market) began offering systems with inherent four digit CIC capability in 1992 and 1994-1995, respectively. NEC (representing 6.5 percent of the market) and Mitel (representing 7.9 percent of the market) began offering such products in approximately 1983 and 1985 respectively. While Lucent indicates that as of March 1997, 68-73 percent of its PBX customers have four digit CIC capable systems, and Nortel indicates 75 percent, Hitachi, representing only 2.1 percent of the PBX sales market, states that 90 percent of its customers have four digit CIC capable systems.

<sup>143</sup> See, e.g., Lucent October 4, 1997 Filing (software changes for both new area codes and CICs would cost 1-5% of the PBX purchase price and require one hour of down time); Lucent April 2, 1997 Filing (hardware/software changes would cost either approximately \$15,000 for one type of system or \$7,500, for another type of system, and both would require 4 hours of down time); Hitachi April 3, 1997 Filing (upgrade costs can vary from \$2,000 to \$40,000 depending upon system release level and configuration for a complete NANP upgrade); Nortel March 31, 1997 Filing (whether software or both hardware and software changes would be necessary, and how much these would cost would vary depending on the installed system type and software release level desired).

<sup>144</sup> See Federal Communications Commission Request for Information from MultiMedia Telecommunications Association members; see MultiMedia Telecommunications Association, dated October 9, 1996 (MMTA October 9, 1996 Filing). MMTA was formerly the North American Telecommunications Association, or NATA.