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Bellcore Letter

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To:
Recipients of North American Numbering Plan (NANP) Information

Entitled Companies
Unrestricted

From:
R. R. Conners, Director - North American Numbering Plan Administration

Abstract

This document provides an update on the status of Numbering Plan Area (NPA) code assignments in World Zone 1. Also included is information regarding the significant numbering changes scheduled to occur in the next few years.

Letter Information (includes safety liability disclaimer (if applicable), ordering information, originator's signature information)

This document is a status report to the industry on Numbering Plan Area (NPA) codes. Included are:

- An alphabetical and numerical listing of all NPA codes
- An Area code map of World Zone 1
- A list of NPA code assignments since 1984
- A list of NPAs scheduled to be split in 1994 and 1995
- A list of NPAs expected to exhaust in the near future
- A report on interchangeable NPA code implementation
- A list of proposed dialing plans for the area served by the North American Numbering Plan
- An Industry Carriers Compatibility Forum (ICCF) document detailing Carrier Identification Code (CIC) expansion
- A CCITT document that explains "Time *T*"

This report was prepared by Garry Benoit. Questions should be directed to Garry on 201-740-4592.

R. R. Conners
Director
North American Numbering Plan Administration

STATUS OF NUMBERING IN THE NANP SERVED AREA
12/31/93

INTRODUCTION

The purpose of this document is to provide an update on the status of geographic Numbering Plan Area (NPA) code assignments in World Zone 1. Also included is information regarding the significant changes scheduled to occur in the next few years; primarily, implementation of interchangeable NPA codes, the final and most critical part of the interchangeable code plan. The introduction of interchangeable NPA codes is the most substantial change to the North American Numbering Plan (NANP) since its inception. It requires significant planning by and cooperation among carriers, equipment vendors and manufacturers, regulators, end-users, and others in the telecommunications industry.

STATUS OF NPA CODE ASSIGNMENTS

Last year we reported that all of the remaining traditional NPA codes have been assigned. Thanks to cooperative efforts by code administrators and the entire industry to conserve numbers, no additional geographic NPA codes have been requested since last year's report for use prior to 1995.

During 1993 NANPA assigned four interchangeable NPA codes. Three geographic codes were assigned: 334 for relief of Alabama's 205 NPA, 360 for relief of Washington State's 206 NPA, and 520 for relief of Arizona's 602 NPA. In addition 456 was assigned for special carrier specific traffic destined for WZ1 from outside of WZ1. The anticipated service dates for these new codes are January 15, 1995 for 334 and 360 and March 19, 1995 for 520. Activation of the 456 NPA code will be coordinated by international carriers with non-World Zone 1 countries. More detail on 456 and its use may be found in Bellcore Information Letter 93/08-002, which can be obtained from Jean Mobley who can be reached at (201) 740-4661.

Attachment A contains a complete report on NPA code assignments and includes

- Current geographic NPA code assignments in alphabetical and numerical order,
- Updated NPA code maps for World Zone 1,
- NPA relief activities completed since 1984,
- Planned NPA splits, with dates for the permissive dialing periods, and
- Projected exhaust dates for NPAs in which exhaust is anticipated prior to 2004.

UPCOMING CHANGES IN THE NUMBERING PLAN

The industry and the public need to be aware of three significant planned numbering changes

- **The introduction of interchangeable NPA codes.** As of January 1, 1995 the industry must be prepared for NPA codes which no longer have zero or one as a middle digit. Interchangeable codes are described in more detail in Attachment B. Also included in Attachment B is a summary of dialing plans to be used in the area served by the NANP. Many of these plans are changing now in anticipation of the introduction of interchangeable NPA codes in 1995. This information is of particular use to customer premise equipment manufacturers and users.

- **Feature Group D carrier identification code (CIC) expansion.** When the current supply of three digit Feature Group D CICs exhausts, the codes will be expanded to four digits. The dialing procedures to select a carrier will change from the current 10XXX to 101XXXX. Consult Attachment C for more details on CIC expansion.

- **Potential increase in the length of telephone numbers.** At the end of 1996, often called "Time *T*", the international standard that controls the length of telephone numbers will change and the maximum permitted length of a telephone number (including the country code) will increase from 12 to 15 digits. No changes are planned for telephone numbers in World Zone 1, but some other countries may take advantage of the new standard. Consult Attachment D for more details on this change.

Note that these changes are likely to require modifications to any telephone switching or customer premise equipment that you may have. Consult your vendor to determine exactly what must be done.

FOR MORE INFORMATION...

For more information on the subjects contained in this report contact NANP administration. Garry Benoit, (201) 740-4592, will answer your questions about NPA code assignments, INPA implementation, and "Time *T*". Jim Deak, (201) 740-4594 will answer your questions about CIC expansion.

Attachment A

NPA CODE ASSIGNMENT REPORT

The North American Numbering Plan was introduced in 1947. At that time 86 NPA codes were assigned to cover the continental United States and Canada. In 1957 Alaska and Hawaii were added to the plan, and in 1958 the 809 NPA was assigned to incorporate Bermuda and many of the Caribbean Basin islands into the numbering plan. As time passed, additional NPA codes were assigned to provide relief in NPAs in which the supply of numbers was exhausting. The table below summarizes NPA relief activities completed since Bellcore became administrator of the numbering plan in 1984.

NPA CODE ASSIGNMENTS SINCE 1984

NPA RELIEF DATE	ORIGINAL NPA	NEW NPA
01/07/84	213	818
09/01/84	212	718
03/05/88	303	719
04/16/88	305	407
07/16/88	617	508
11/11/89	312	708
11/01/90	201	908
11/04/90	214	903
09/02/91	415	510
10/06/91	301	410
11/02/91	213	310
01/01/92	212, 718	917*
05/03/92	404	706
07/01/92	212#	718#
11/01/92	512	210
11/14/92	714	909

In the above table (*) indicates that 917 is an overlay to NPAs 212 and 718, and (#) indicates that the Bronx moved from the 212 NPA to the 718 NPA.

Several NPA relief activities are currently in progress or planned, as shown in the table below. Note that interchangeable NPA codes will be introduced in some of the areas affected. In this table the "split date" is the date when callers can begin dialing the new NPA code. The "end of permissive period" is the date when all calls to the old or new NPAs must be dialed with the correct NPA code.

NPA SPLITS IN PROGRESS OR PLANNED

STATE / PROVINCE	NPA CODE	NEW NPA CODE	SPLIT DATE	END OF PERMISSIVE PERIOD
Ontario	416	905	10/04/93	03/26/94
North Carolina	919	910	11/14/93	02/13/94
Michigan	313	810	12/01/93	08/10/94
Pennsylvania	215	610	01/08/94	01/07/95
Alabama	205	334	01/15/95	05/13/95
Washington State	206	360	01/15/95	07/09/95
Arizona	602	520	03/19/95	07/25/95

Bellcore, in its role as administrator of the numbering plan, prepares an annual survey projecting when each existing NPA will exhaust. The information is useful in planning for future NPA relief activities. The table below identifies NPAs currently projected to exhaust in the next ten years.

NPAs PROJECTED TO EXHAUST
(792 NXX CODES) PRIOR TO 2004

STATE	NPA	PROJECTED EXHAUST
Alabama	205	1995 2Q
Texas	713	1995 4Q
Texas	214	1996 2Q
Illinois	708	1996 3Q
Washington	206	1996 4Q
Georgia	404	1996 4Q
Florida	305	1997 2Q
Arizona	602	1997 4Q
Texas	817	1998 1Q
California	310	1998 2Q
Virginia	703	1998 3Q
Ohio	216	1998 4Q
Oregon	503	1998 4Q
Florida	813	1998 4Q
Tennessee	615	1998 4Q
California	619	1999 1Q
Colorado	303	1999 3Q
Caribbean	809	1999 4Q
Br. Columbia	604	2000 1Q
Indiana	317	2000 2Q
Connecticut	203	2001 1Q
Illinois	312	2001 2Q
Minnesota	612	2001 2Q
Florida	904	2001 3Q
Maryland	301	2001 3Q
Ohio	513	2002 2Q
Kansas	913	2002 3Q
Florida	407	2003 2Q
New Jersey	201	2003 3Q
California	714	2003 3Q
California	909	2003 3Q

The following pages summarize NPA code assignments alphabetically by location and then numerically by code. Following these tables are the current NPA code maps.

NUMBERING PLAN AREA CODES
IN ALPHABETICAL ORDER
(as of December 1993)

LOCATION OR OTHER SPECIAL USE	AREA CODE
800 Service	800
900 Service	900
Alabama	205
Alabama	334
Alaska	907
Alberta	403
Arizona	520
Arizona	602
Arkansas	501
Caribbean Islands	809
British Columbia	604
California	209
California	213
California	310
California	408
California	415
California	510
California	619
California	707
California	714
California	805
California	818
California	909
California	916
Canada (Services)	600
Colorado	303
Colorado	719
Connecticut	203
Delaware	302
Dist. of Columbia	202
Florida	305
Florida	407
Florida	813
Florida	904
Georgia	404
Georgia	706
Georgia	912
Hawaii	808
IC Services	700
International Inbound	
Idaho	208
Illinois	217
Illinois	309
Illinois	312
Illinois	618
Illinois	708
Illinois	815
Indiana	219
Indiana	317
Indiana	812
Iowa	319
Iowa	515
Iowa	712
Kansas	316
Kansas	913
Kentucky	502
Kentucky	606
Louisiana	318
Louisiana	504
Maine	207
Manitoba	204
Maryland	301
Maryland	410
Massachusetts	413
Massachusetts	508
Massachusetts	617
Michigan	313
Michigan	517
Michigan	616
Michigan	810
Michigan	906
Minnesota	218
Minnesota	507
Minnesota	612
Mississippi	601
Missouri	314
Missouri	417
Missouri	816
Montana	406
Nebraska	308
Nebraska	402
Nevada	702
New Brunswick	506
New Hampshire	603
New Jersey	201
New Jersey	609
New Jersey	908
New Mexico	505
New York	212
New York	315
New York	516
New York	518
New York	607
New York	716
New York	718
New York	914
New York	917
Newfoundland	709
North Carolina	704
North Carolina	910
North Carolina	919
North Dakota	701
Nova Scotia	902
Ohio	216
Ohio	419
Ohio	513
Ohio	614
Oklahoma	405
Oklahoma	918
Ontario	416
Ontario	519
Ontario	613
Ontario	705
Ontario	807
Ontario	905
Oregon	503
Pennsylvania	215
Pennsylvania	412
Pennsylvania	610
Pennsylvania	717
Pennsylvania	814
Quebec	418
Quebec	514
Quebec	819
Rhode Island	401
Saskatchewan	306
South Carolina	803
South Dakota	605
Tennessee	615
Tennessee	901
Texas	210
Texas	214
Texas	409
Texas	512
Texas	713
Texas	806
Texas	817
Texas	903
Texas	915
U.S. Government	710
Utah	801
Vermont	802
Virginia	703
Virginia	804
Washington	206
Washington	360
Washington	509
West Virginia	304
Wisconsin	414
Wisconsin	608
Wisconsin	715
Wyoming	307

NUMBERING PLAN AREA CODES
IN NUMERICAL ORDER
(as of December 1993)

AREA CODE	LOCATION OR OTHER SPECIAL USE
201	New Jersey
202	Dist. of Columbia
203	Connecticut
204	Manitoba
205	Alabama
206	Washington
207	Maine
208	Idaho
209	California
210	Texas
212	New York
213	California
214	Texas
215	Pennsylvania
216	Ohio
217	Illinois
218	Minnesota
219	Indiana
301	Maryland
302	Delaware
303	Colorado
304	West Virginia
305	Florida
306	Saskatchewan
307	Wyoming
308	Nebraska
309	Illinois
310	California
312	Illinois
313	Michigan
314	Missouri
315	New York
316	Kansas
317	Indiana
318	Louisiana
319	Iowa
334	Alabama
360	Washington
401	Rhode Island
402	Nebraska
403	Alberta
404	Georgia
405	Oklahoma
406	Montana
407	Florida
408	California
409	Texas
410	Maryland
412	Pennsylvania
413	Massachusetts
414	Wisconsin
415	California
416	Ontario
417	Missouri
418	Quebec
419	Ohio
456	International Inbound
501	Arkansas
502	Kentucky
503	Oregon
504	Louisiana
505	New Mexico
506	New Brunswick
507	Minnesota
508	Massachusetts
509	Washington
510	California
512	Texas
513	Ohio
514	Quebec
515	Iowa
516	New York
517	Michigan
518	New York
519	Ontario
520	Arizona
600	Canada (Services)
601	Mississippi
602	Arizona
603	New Hampshire
604	British Columbia
605	South Dakota
606	Kentucky
607	New York
608	Wisconsin
609	New Jersey
610	Pennsylvania
612	Minnesota
613	Ontario
614	Ohio
615	Tennessee
616	Michigan
617	Massachusetts
618	Illinois
619	California
700	IC Services
701	North Dakota
702	Nevada
703	Virginia
704	North Carolina
705	Ontario
706	Georgia
707	California
708	Illinois
709	Newfoundland
710	U.S. Government
712	Iowa
713	Texas
714	California
715	Wisconsin
716	New York
717	Pennsylvania
718	New York
719	Colorado
800	800 Service
801	Utah
802	Vermont
803	South Carolina
804	Virginia
805	California
806	Texas
807	Ontario
808	Hawaii
809	Caribbean Islands
810	Michigan
812	Indiana
813	Florida
814	Pennsylvania
815	Illinois
816	Missouri
817	Texas
818	California
819	Quebec
900	900 Service
901	Tennessee
902	Nova Scotia
903	Texas
904	Florida
905	Ontario
906	Michigan
907	Alaska
908	New Jersey
909	California
910	North Carolina
912	Georgia
913	Kansas
914	New York
915	Texas
916	California
917	New York
918	Oklahoma
919	North Carolina

Attachment B

OVERVIEW OF THE INTERCHANGEABLE CODE PLAN

1. INTRODUCTION

The North American Numbering Plan (NANP), which specifies the format for telephone numbers in the United States, Canada, Bermuda, and many Caribbean Basin islands, was developed by AT&T and Bell Laboratories in the late 1940s. At the time of its original design, the NANP was thought to have enough capacity to last until the turn of the century or later. By the late 1950s, however, it became apparent that new area codes were being assigned at a rate significantly higher than originally anticipated. Out of that early concern came a plan to expand the supply of numbers through the introduction of interchangeable codes, which are explained in detail below. Implementation of the interchangeable code plan began in February of 1974 with the implementation of interchangeable central office codes in Los Angeles' 213 NPA and will conclude with the implementation of interchangeable NPA codes in 1995.

One of the primary strengths of the interchangeable code plan is that it retains the current ten-digit telephone number format, allowing for expansion without requiring changes in currently assigned telephone numbers. As a result the impact and cost of implementing the plan, although substantial for the industry, are minimized for the general public.

2. INTERCHANGEABLE CODES

2.1 What Are Interchangeable Codes?

The essence of the plan is to expand the capacity of the NANP by making NPA codes and central office codes "interchangeable" by allowing codes formerly reserved for exclusive use as NPA codes to be used as central office codes and by allowing codes formerly reserved for exclusive use as central office codes to be used as NPA codes.

- *Interchangeable central office codes* exist in NPAs that have introduced central office codes in NPA code format. Interchangeable central office codes can be introduced in an NPA without affecting dialing procedures or switching arrangements in other NPAs. As of the publication date of this document, 55 NPAs have introduced interchangeable central office codes, primarily to gain additional central office code capacity and to defer NPA splits.

- *Interchangeable NPA codes* will exist when the first code in central office code format is put into service as an NPA code. The introduction of interchangeable NPA codes must be coordinated throughout the area served by the NANP.

Introducing interchangeable codes expands the capacity of the NANP from its current capacity of slightly less than one billion numbers to more than six billion numbers, enough to last us well into the next century.

2.2 When Will Interchangeable NPA Codes Be Introduced?

NANP administration is responsible for monitoring the need for new NPA codes and for projecting the date when interchangeable codes will be required. Such projections are based on the annual Central Office Code Utilization Survey (COCUS). Each year central office code administrators provide an updated five year forecast of the demand for central office codes in each NPA in which they assign these codes. From this data NANP administration projects both an exhaust date for each NPA and a date on which relief will be required through the assignment

of a new NPA code. NANP administration thus has a running view of the need for new NPA codes and can project when the supply will exhaust.

Based on COCUS results NANP administration notified the industry in January 1992 that interchangeable NPA codes would be required early in 1995 and the industry must be prepared for the introduction of these codes no later than January 1, 1995.

2.3 The Need For Readiness

Less than one year now remains to complete preparation for the implementation of interchangeable NPA codes. Unless customer premise equipment (CPE) owners and carriers adequately plan and prepare in advance for this required capability, their customers may lose the ability to dial areas that have been assigned NPA codes in interchangeable format.

3.0 THE IMPACT OF INTERCHANGEABLE CODES

Implementation of interchangeable codes impacts every segment of the industry and significant expenditures may be required. Some of the required modifications are independent of whether interchangeable central office codes or interchangeable NPA codes are introduced first, although some costs have been specifically tied to interchangeable NPA codes. Modification may be required in switching equipment hardware and software, operations support systems, and possibly customer dialing procedures. CPE such as PBXs are likely to be affected.

3.1 Effects on Switching Equipment

When interchangeable codes are introduced, switching systems can no longer distinguish between 7- and 10-digit addresses by examining the first three digits received. Restoring this capability may require generic software updates to electronic switches and the possible phase out of some older electromechanical equipment. The introduction of interchangeable NPA codes has been delayed as long as possible. All carriers and CPE owners must take the necessary steps to ensure that their equipment will be able to process interchangeable NPA codes by January 1, 1995.

Switching system requirements for the support of interchangeable codes have been incorporated in the LATA Switching Systems Generic Requirements (LSSGR) and its predecessors since the 1960s. Interchangeable central office code capability has already been incorporated in some software generics for electronic switches. ***Information from switch and CPE vendors indicates that at least some switches and CPE definitely require upgrades.*** Some of the reasons cited by vendors include a need to change software to accept more than 160 NPAs or removal of current restrictions limiting the second digit of the NPA code to zero or one.

3.2 Effects on Dialing Plans

As indicated above, when interchangeable codes are introduced, switches lose the ability to distinguish between 7- and 10-digit calls by examining the first three digits dialed. Resolution of this problem can result in a need to change current dialing plans, as described in section 4.2 below. Attachment B-2 contains a table of proposed dialing plans.

3.3 Effects on Operations Support Systems Software

Since introduction of interchangeable codes does not change the length of telephone numbers, major operations support systems impact is not expected. Some operations support systems, however, may have incorporated checks on the middle digit of an NPA code to insure that a 0 or 1 has been entered. All such edits must be removed before the introduction of interchangeable

NPA codes. In addition, telecommunication service providers with systems that are currently using "pseudo" interchangeable NPA codes for routing and billing should find alternate ways of performing these functions.

3.4 End-User Impact

The impact of interchangeable NPA codes on end-users will be limited primarily to the areas in which interchangeable NPA codes are first assigned and to people who call these areas. In these cases users will need to adjust to NPA codes with a new "look."

CPE such as PBXs are likely to need updates to their systems. For example, toll restriction features may currently block calls to NPAs in the new format. It is advised that CPE owners / administrators contact the manufacturer of their equipment to discuss what changes need to be made to support interchangeable codes. Manufacturers may choose not to update some of their older equipment, and customers with such equipment need to budget and plan for the required replacements.

Also, as noted above, customers will be affected in areas that require dialing plan changes to support interchangeable codes.

4. PLANNING FOR INTERCHANGEABLE NPA CODES

The importance of early preparation for interchangeable codes cannot be overemphasized. You must plan for interchangeable NPA codes now. Switch / CPE replacements or generic upgrades may be required, and the requisite capital must be found. To avoid multiple upgrade costs, the upgrades required for interchangeable codes could be coordinated with those required for other major changes such as carrier identification code (CIC) expansion or "Time T".

4.1 Resolving The 7-Digit Vs. 10-Digit Call Ambiguity

As indicated earlier, when interchangeable codes are introduced, switching systems lose the ability to distinguish between 7- and 10-digit addresses by examining the first three digits received. Three methods have been proposed:

- *The prefix method* requires the caller to provide a positive indication of the length of the address being dialed by prefixing a "1" (or a "0") to all 10-digit calls. 1 + 7-digit or 0 + 7-digit dialing is not permitted under the prefix method. A slight variation to this method also allows the dialing of adjacent NPA codes on a straight 10 digit basis without the "1" by protecting those codes.

- *The timing method* requires the switch to wait a fixed period of time (approximately 4 seconds) after seven digits have been received to see if additional digits are received. If no additional digits are received within the required period, the switch will time out and process the call as a 7-digit call. The timing method has a significant disadvantage in that it adds to call-setup time and to the holding time for telephone switching equipment.

- *The hybrid method* is a compromise between the prefix and timing methods. The hybrid method requires timing only in those cases in which a toll call is dialed on a 1 + 7-digit basis, and the dialed NXX code is assigned as both a central office code within the home NPA and as an NPA somewhere else in the North American network. To implement the hybrid method, the switch must be capable of examining the first three digits received after a leading "1" to determine whether they are an NPA code only, a central office code only, or an ambiguous code in use as both. Only in the latter case will the timing option have to be applied, after the seventh digit, to determine whether a 7- or 10-digit number is being

received. The hybrid method would also add to call set-up time and holding time for common control equipment.

The method of choice is the prefix method. Although the prefix method requires the dialing of an extra digit that is not part of the 10-digit telephone number, the extra digit is required only on 10-digit calls. Most main stations already dial the prefix "1" for 10-digit calls. The prefix method avoids the need for imposing a four-second post-dialing delay on some, or all, local calls as required by the hybrid and timing methods respectively. Avoidance of this extra delay on local calls is beneficial both to the carriers in the form of reduced holding time for the switching system's common control equipment, and to the caller in the form of reduced call-setup delay.

4.2 Dialing Plans

As indicated above, the prefix method has become a *de facto* standard for distinguishing between 7- and 10-digit calls. Under the prefix method, dialing of 1 + 7-digits for home NPA toll calls (or 0 + 7-digits) is *no longer permissible*. Areas currently using 1 + 7-digit dialing to identify these calls will be changing their dialing procedures. Two options predominate: Home NPA toll calls can be dialed either as 7-digits or as 1 + 10 digits.

There is no standard dialing plan in the area served by the NANP, although some areas have used the introduction of interchangeable codes as an opportunity to establish area-wide, state-wide, or region-wide standard dialing plans. State-by-state dialing plans are summarized in Attachment B-2.

4.3 Upgrading Operations Support Systems

Although major problems are not expected in operations support systems, it is still necessary to evaluate the software you use for potential problems as soon as possible. Should any problems be found, time and budget must be allocated for resolving these problems.

5. NANP-WIDE TEST FACILITY

The Network Operations Forum is putting together a test plan for interchangeable NPAs. Two separate test numbers are under consideration. One will provide an announcement. The other will provide answer supervision to allow checkout of billing programs. Details of the test facility will be announced at a later date.

IL-94/01/001
1/3/94
Revision 1, June 1994

Status of Numbering in the NANP Served Area
Revision Control Sheet

This document is being issued to update Attachment B-2 (NANP DIALING IN ANTICIPATION OF INPA) of IL-94/01/001, *Status of Numbering in the NANP Served Area*. Please replace Attachment B-2 in its entirety with the attached updated section. Changes are indicated with the entry of an asterisk (*) next to the impacted NPA.

NANP DIALING
IN ANTICIPATION OF INPA

The attached table contains proposed dialing plans for the area served by the North American Numbering Plan (NANP). The table includes changes which have been or are being made in anticipation of the implementation of Interchangeable Numbering Plan Area (INPA) codes in January of 1995. The information entered in the matrix is or will be the predominant method of dialing at each location. There may be instances where the dialing plan of a community within a Numbering Plan Area (NPA) may be different than the general dialing procedure for that NPA. Because of the many dialing changes taking place around the same time frame there will not be a separate Information Letter for each change.

The following are definitions of headings and abbreviations used in the table:

LOCATION:	The state, province, country, or territory served by the North American Numbering Plan for which the dialing plan is being provided.
NPA CODE:	The Numbering Plan Area code (area code) for the LOCATION.
HNPA LOCAL:	The procedure for dialing local calls (generally calls that do not incur a charge) within the (home) NPA CODE.
HNPA TOLL:	The procedure for dialing toll calls (generally calls that incur a charge) within the (home) NPA CODE.
FNPA LOCAL:	The procedure for dialing local calls (generally calls that do not incur a charge) outside of (foreign) NPA CODE.
FNPA TOLL:	The procedure for dialing toll calls (generally calls that incur a charge) outside of (foreign) NPA CODE.
OPER. ASSISTED:	The procedure for dialing all operator assisted calls including credit card calls, collect, and third party calls.
PERMISS. HNPA LOCAL:	Although the procedure for dialing a HNPA LOCAL call is shown under the column of HNPA LOCAL, it is also "permissible" for the dialer to place the call using the method under this column.
PERMISS. HNPA TOLL:	Although the procedure for dialing a HNPA TOLL call is shown under the column of HNPA TOLL, it is also "permissible" for the dialer to place the call using the method under this column.
PERMISS. FNPA LOCAL:	Although the procedure for dialing a FNPA LOCAL call is shown under the column of FNPA LOCAL, it is also "permissible" for the dialer place the call using the method under this column.
START DIALING DATE:	The date when the dialing plan shown will be introduced. On this date the dialer can dial by the method shown in the table or he or she can dial by the existing method (e.g., 1+7D for HNPA toll).

NANP DIALING
IN ANTICIPATION OF INPA

MANDAT. DIALING DATE: The date when the dialing plan shown will be made mandatory. On this date the dialer **must** dial by the method shown in the table.

NA: An entry of NA indicates that this option is not available for the location.

IN EFF. Indicates that the dialing changes necessary for the introduction of interchangeable codes have already been implemented in this LOCATION.

NANP DIALING
IN ANTICIPATION OF INPA
(As of June 14, 1994)

LOCATION	NPA CODE	HNPA LOCAL	HNPA TOLL	FNPA LOCAL	FNPA TOLL	OPER. ASSISTED	PERMISS. HNPA LOCAL	PERMISS. HNPA TOLL	PERMISS. FNPA LOCAL	START DIALING DATE	MANDAT. DIALING DATE
Alabama	205*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Alaska	907	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	NA	01/01/95
Alberta	403	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Anguilla	809	7D	1+10D	NONE	1+10D	0+10D	4D	NA	NA	10/03/93	01/09/94
Antigua	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Arizona	602	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Arkansas	501	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	01/03/95
Bahamas	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	01/09/94
Barbados	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Bermuda	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
British Columbia	604	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
British Virgin Islands	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	01/09/94
Cayman Islands	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
California	209	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	10/11/93	10/10/94
California	213	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	310	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	408	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	10/11/93	10/10/94
California	415	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	510	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	619	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	10/11/93	10/10/94
California	707	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	10/11/93	10/10/94
California	714	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	805	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	10/11/93	10/10/94
California	818	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	909	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
California	916	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	10/11/93	10/10/94
Colorado	303	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	10/17/93	02/27/94
Colorado	719	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	10/17/93	02/27/94

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Connecticut	203	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	02/28/94	09/24/94
Delaware	302*	7D	1+10D	7D	1+10D	0+10D	1+10D	NA	NA	04/01/94	01/07/95
Dist. of Columbia	202	7D	NONE	10D	1+10D	0+10D	10D/1+10D	NA	1+10D	IN EFF.	IN EFF.
Dominica	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	01/09/94
Dominican Republic	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	01/09/94
Florida	305*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Florida	407*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Florida	813	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Florida	904*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Georgia	404*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Georgia	706*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Georgia	912*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Grenada	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	01/09/94
Hawaii	808	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	06/19/94	10/15/94
Idaho	208	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	10/17/94	02/27/94
Illinois	217*	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	05/13/94	11/30/94
Illinois	309*	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
Illinois	312	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Illinois	618	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Illinois	708	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Illinois	815	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Indiana	219	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	09/01/93	12/01/93
Indiana	317	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	09/01/93	12/01/93
Indiana	812	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	09/01/93	12/01/93
Iowa	319	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
Iowa	515	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
Iowa	712	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
Jamaica	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.

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Kansas	316	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	11/01/94
Kansas	913	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	11/01/94
Kentucky	502*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	09/04/93	04/02/94
Kentucky	606*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	09/04/93	04/02/94
Louisiana	318	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	09/04/93	04/02/94
Louisiana	504	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	09/04/93	04/02/94
Maine	207*	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	07/15/94	10/15/94
Manitoba	204	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Maryland	301	7D	1+10D	10D	1+10D	0+10D	10D/1+10D	NA	1+10D	IN EFF.	IN EFF.
Maryland	410	7D	1+10D	10D	1+10D	0+10D	10D/1+10D	NA	1+10D	IN EFF.	IN EFF.
Massachusetts	413*	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	06/21/94	10/01/94
Massachusetts	508*	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	07/15/94	10/15/94
Massachusetts	617*	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	07/15/94	10/15/94
Michigan	313	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Michigan	517	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	05/01/94	11/01/94
Michigan	616	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	05/01/94	11/01/94
Michigan	810	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Michigan	906	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	02/01/94	08/01/94
Minnesota	218	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	05/15/94	09/18/94
Minnesota	507	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	05/15/94	09/18/94
Minnesota	612	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	05/15/94	09/18/94
Mississippi	601*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	12/01/93	05/01/94
Missouri	314	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	07/01/94	11/01/94
Missouri	417	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	11/01/94
Missouri	816	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	11/01/94
Montana	406	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	06/19/94	10/02/94
Montserrat	809	7D	1+10D	NONE	1+10D	0+10D	4D	NA	NA	10/03/93	01/09/94
Nebraska	308	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	05/15/94	09/18/94

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Nebraska	402	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	05/15/94	09/18/94
Nevada	702	7D	1+10D	1+10D	1+10D	0+10D	1+10D	NA	NA	07/1/94	12/30/94
New Brunswick	506	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
New Hampshire	603	7D	7D	1+10D	1+10D	0+10D	NA	1+10D	NA	05/10/94	08/10/94
New Jersey	201	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
New Jersey	609	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	01/01/94
New Jersey	908	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
New Mexico	505	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
New York	212*	7D	NONE	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
New York	315*	7D	7D	1+10D	1+10D	0+10D	NA	1+10D	NA	IN EFF.	12/17/94
New York	516*	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	09/24/94
New York	518*	7D	7D	1+10D	1+10D	0+10D	NA	1+10D	NA	IN EFF.	12/17/94
New York	607*	7D	7D	1+10D	1+10D	0+10D	NA	1+10D	NA	IN EFF.	12/17/94
New York	716*	7D	7D	1+10D	1+10D	0+10D	NA	1+10D	NA	IN EFF.	12/17/94
New York	718*	7D	NONE	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
New York	914*	7D	7D	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	09/24/94
New York	917*	7D	NONE	1+10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Newfoundland	709	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
North Carolina	704*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
North Carolina	910*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
North Carolina	919*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
North Dakota	701	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	06/19/94	10/02/94
North W. Territories	403	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
North W. Territories	604	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Nova Scotia	902	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Ohio	216	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	01/01/94	01/01/95
Ohio	419	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	01/01/94	01/01/95
Ohio	513	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	01/01/94	01/01/95

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Ohio	614	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	01/01/94	01/01/95
Oklahoma	405	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	01/03/95
Oklahoma	918	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	07/01/94	01/03/95
Ontario	416	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Ontario	519	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Ontario	613	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Ontario	705	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Ontario	807	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Ontario	905	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Oregon	503	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Pennsylvania	215	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	IN EFF.	IN EFF.
Pennsylvania	412	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	11/01/93	08/01/94
Pennsylvania	610	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	01/08/94	01/07/95
Pennsylvania	717	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	11/01/93	08/01/94
Pennsylvania	814	7D	7D	1+10D	1+10D	0+10D	1+10D	1+10D	NA	11/01/93	08/01/94
Prince Edward Island	902	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Puerto Rico	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	01/09/94
Quebec	418	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Quebec	514	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Quebec	819	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
Rhode Island	401	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	12/18/93	03/18/94
Saskatchewan	306	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95
South Carolina	803*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	01/01/94	06/01/94
South Dakota	605	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
St. Kitts & Nevis	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
St. Lucia	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
St. Vincent	809	7D	0+1+10D	NONE	1+10D	115+10D	NA	NA	NA	10/03/93	01/09/94
Tennessee	615*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.

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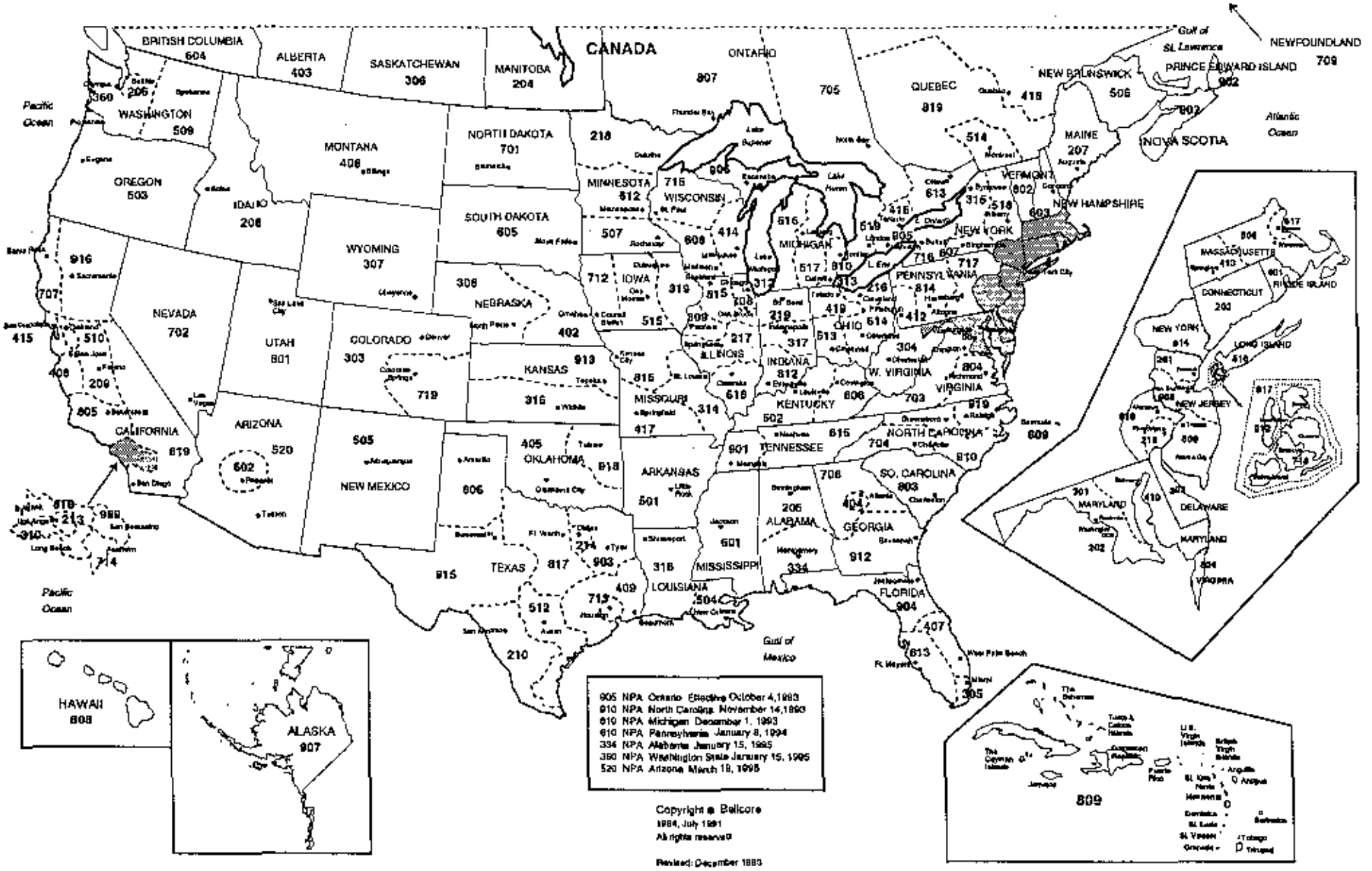
Tennessee	901*	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Texas	210	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Texas	214	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Texas	409	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	07/01/94	01/03/95
Texas	512	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Texas	713	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Texas	806	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	07/01/94	01/03/95
Texas	817	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	10/20/93	01/19/94
Texas	903	7D	1+10D	10D	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Texas	915	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	07/01/94	01/03/95
Trinidad	809	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Turks & Caicos Is.	809	7D	0+1+10D	NONE	1+10D	115+10D	5D	NA	NA	10/03/93	01/09/94
U.S. Virgin Islands	809*	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	10/03/93	07/01/94
Utah	801	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	02/13/94	06/19/94
Vermont	802*	7D	1+10D	1+10D	1+10D	0+10D	NA	NA	NA	03/18/94	05/18/94
Virginia (WMEA)	703	7D	1+10D	10D	1+10D	0+10D	10D/1+10D	NA	1+10D	IN EFF.	IN EFF.
Virginia	703	7D	1+10D	7D	1+10D	0+10D	10D/1+10D	NA	10D/1+10D	05/18/94	11/16/94
Virginia	804	7D	1+10D	7D	1+10D	0+10D	10D/1+10D	NA	10D/1+10D	05/18/94	11/16/94
Washington	206	7D	1+10D	NONE	1+10D	0+10D	NA	NA	NA	IN EFF.	IN EFF.
Washington	509	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	05/15/94	09/18/94
West Virginia	304*	7D	1+10D	7D	1+10D	0+10D	1+10D	NA	1+10D	05/01/94	01/01/95
Wisconsin	414	7D	1+10D	1+10D	1+10D	0+10D	1+10D	NA	NA	05/15/94	12/01/94
Wisconsin	608	7D	1+10D	1+10D	1+10D	0+10D	1+10D	NA	NA	05/15/94	12/01/94
Wisconsin	715	7D	1+10D	1+10D	1+10D	0+10D	1+10D	NA	NA	05/15/94	12/01/94
Wyoming	307	7D	1+10D	7D	1+10D	0+10D	NA	NA	NA	06/19/94	10/02/94
Yukon	403	7D	1+10D	NA	1+10D	0+10D	NA	NA	NA	09/04/94	01/07/95

* The dialing information for this location have been updated since the December 16, 1993 version of this table.

Numbering Plan Areas With Codes



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Compatibility Forum

Under the auspices of the
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Carrier Identification Code (CIC) Expansion

Carrier Identification Code
Workshop

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Sponsored by the Exchange Carriers
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CARRIER IDENTIFICATION CODE (CIC) EXPANSION

Background

Carrier Identification Codes (CICs) provide routing and billing information for calls from end users via trunk-side connections to interexchange carriers (ICs) and other entities[1]. Entities connect their facilities to Bell operating company (BOC) or other local exchange carriers (LEC) networks using several different access arrangements, the common ones being Feature Group B (FG B) and Feature Group D (FG D). Any entity purchasing FG B and/or FG D trunk side access from an access provider, e.g., LEC, under provisions of local access tariffs is assigned a CIC by North American Numbering Plan administration (NANPA) under industry approved guidelines.

Feature Group B & D Dialing Plan

FG B callers can reach an entity's facilities by dialing a Carrier Access Code (CAC) of the format 950-WXXX, where W= 0 or 1, and X = 2-9. The three X digits identify the entity to be reached and are called the CIC. When the call is "cut through" for IC service, for example, the entity switching equipment provides second dial tone indicating that the caller must dial a personal identification number plus the number to be called[2].

FG D permits callers or service providers to presubscribe to or select a specific interexchange carrier on a per-call basis. A caller may override presubscription by dialing 10XXX + 0/1 + 10 digits, where 10XXX is the CAC. Again, the CIC is the three X digits. When a 3-digit CIC is assigned by NANPA it can be used for FG B and/or FG D service, at the discretion of the CIC holder.

3-Digit CIC Assignments

Based on guidelines that achieved industry consensus in 1987, the maximum quantity of CICs that may be assigned per entity was established as: one primary, two supplemental and one international CIC. Since March 1989, when the number of CICs assigned reached the 700 level, assignments were based on conservation conditions established by the industry, and the maximum number of assignable CICs was reduced to one per entity.

CIC Expansion

It was originally expected that the supply of 3-digit CICs would last an indefinite period of time. However, in recent years the demand has steadily increased, such that over 800 CICs are now assigned out of a possible 969 assignable codes[3]. Recognizing the eventual exhaust of CICs, workshops were held in 1987 and 1988 at which time the industry developed the following two-phase plan to increase the CIC supply:

Phase 1: Near the time the supply of 3-digit CICs is expected to exhaust, FG B and FG D CICs will be split into two separate assignment pools of numbers and, simultaneously, FG B CICs will be expanded from 3 to 4-digits. The FG B dialing format will then be, 950-XXXX. Notice there will be no actual FG B dialing change, only the elimination of the constraint on the 4th digit to be a 0 or 1. FG D CICs will remain in the 3-digit format

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1 In 1986, the FCC ruled in First Data Resources that applicants are not required to be interexchange carriers to qualify for a CIC. Any entity may be assigned a CIC if the assignment guidelines are satisfied.

2 In many applications of FG B service, since the entity holding the CIC need not be an interexchange carrier, the activities after dialing 950-WXXX may vary. The example given here is for accessing an IC's network.

3 Specific blocks of numbers have been reserved to allow for FG D expansion, thereby reducing the maximum available CIC assignments to 969.

for as long as possible by recovering and assigning FG B-only CICs that become available after the split in the assignment pools. Technical requirements for FG B CIC expansion may be found in Bellcore document TR-TSY-000698, Feature Group B, Issue 1, June 1989 and Revision 1, July 1990. *The current scheduled date for FG B expansion is 1Q93.*

Phase 2: A period of time after Phase 1 takes place, when the supply of 3-digit FG D CICs runs out, FG D CICs will be expanded to four digits. The CAC will be changed from 5-digits, 10XXX, to 7-digits, 101XXXX. Note: this represents a major change in dialing. The plan calls for a permissive period whereby 10XXX and 101XXXX CACs may both be dialed, but eventually 10XXX will be eliminated. Technical requirements for Phase 2 CIC expansion may be found in Bellcore document TR-NWT-001050, Expansion of Carrier Identification Code Capacity for Feature Group D (FG D), Issue 1, April 1991. *The current target date for FG D expansion is 1H95.*

4-Digit CIC Assignments

Guidelines have been developed in an industry consensus process for the assignment of 4-digit FG B and FG D CICs, and the assignment criteria may be found in the document, Carrier Identification Code Assignment Guidelines, dated June 11, 1992. For example, after Phase 1 expansion, a maximum of five FG B CICs may be assigned per entity, beginning with the 5000 and 6000 number ranges, respectively. Similarly, after Phase 2 expansion, a maximum of six FG D CICs may be assigned per entity, beginning with the 5000 and 6000 number ranges, respectively.

7/23/92

NOTE:
The attached version of E.165 was copied from CCITT "Blue Book",
Volume II - Fascicle II.2, November, 1988

TIMETABLE FOR COORDINATED IMPLEMENTATION OF THE FULL CAPABILITY OF THE NUMBERING PLAN FOR THE ISDN ERA (RECOMMENDATION E.164)

1 Introduction

Recommendation I.330 describes ISDN numbering and addressing principles, while Recommendation E.164 describes the numbering plan for the ISDN era. Recommendation E.164 also identifies the need for interworking arrangements between ISDN and present dedicated networks.

This Recommendation sets a specific time (Time *T*), after which all ISDNs and PSTNs can use the full capability of Recommendation E.164, "Numbering plan for the ISDN era", and identifies the numbering requirements on ISDNs and on dedicated networks intending to interwork with ISDNs, before and after Time *T*.

Among the significant principles which form the basis for this Recommendation, the following are considered especially useful for ready reference:

- An E.163/E.164 telephony subscriber may become an ISDN subscriber without a number change.
- Numbers according to Recommendation E.164 apply to both PSTN and ISDN subscribers in the ISDN era. A mixture of PSTN and ISDN terminations on the same exchange is allowed.
- E.164 numbering arrangements may be used to distinguish between ISDN and PSTN subscribers. This is not necessary but is allowed, provided that possible effects on routing and digit analysis remain within the limits of Recommendation E.164.

2 Application and evolution of Time *T*

ISDNs are expected to interwork with dedicated networks. However, due to the different addressing capabilities between the ISDN and existing numbering plans, some temporary constraints need to be imposed on the number length and digit analysis required to access the user network interfaces of the ISDNs before Time *T*.

2.1 *Numbering constraints before Time T*

2.1.1 *ISDNs interworking with dedicated networks*

To allow numbering plan interworking with dedicated networks before Time *T*, an ISDN will not assign international E.164 numbers longer than 12 digits to its user network interfaces capable of receiving calls from dedicated networks.

In addition, for ISDNs and PSTNs, digit analysis as defined in Recommendation E.163 will apply.

2.1.2 *ISDNs which do not interwork with dedicated networks*

These ISDNs are allowed to assign numbers to user network interfaces according to the full capability of the numbering plan for the ISDN era.

Digit analysis according to Recommendation E.164 may be required to access user network interfaces connected to these networks.

2.2 *Evolution after Time T*

After Time *T*, ISDNs and PSTNs can make use of the full capability of E.164 numbers to identify their user network interfaces and terminals respectively. In addition, for routing purposes, the ISDNs and PSTNs conforming to Recommendation E.164 must be capable of analysing the ISDN international number to the extent required in that Recommendation.

Note — Digit analysis for other dedicated networks is for further study.

3 Date of Time *T*

The date for Time *T* has been set for 31 December 1996 at 23h59m Coordinated Universal Time UTC).

4 Network requirements at Time *T*

ISDNs and PSTNs supporting number length and digit analysis as described in Recommendation E.164 are said to be "E.164-conforming" networks.

All ISDNs must be E.164-conforming networks. Functions associated with E-164-conforming networks are:

a) for calls originated within such a network, provision for carrying E.164 numbers of up to 15 digits to interfacing networks;

b) comparable treatment for transit calls;

c) capability for conducting digit analysis for ISDNs and PSTNs as indicated in Recommendation E.164;

d) screening to ensure that, taking into account agreements between the networks concerned, no transit calls are offered to non-conforming networks incapable of handling number lengths as defined in Recommendation E.164;

e) provision of interim procedures, such as two-stage selection, for internal network sources, e.g., local exchanges, not equipped to handle 15 digits, so that all internal network sources can originate calls to all E.164 addresses.

Note 1 — Other requirements on conforming networks are for further study. Non-conforming networks may seek bilateral agreements with conforming networks, or adopt intra-network procedures to provide means by which subscribers of the non-conforming networks may originate calls to subscribers connected to ISDNs and PSTNs requiring a number length or analysis in excess of the capabilities of the non-conforming network.

Note 2 — Limitations of non-conforming networks and interworking procedures are for further study.