



ATIS-0300069

**REPORT ON UNASSIGNED NUMBER
PORTING (UNP)**

Reissued with the resolution of Issue 177 & 222.

January 8, 2001

Copyright © 2001 by the Alliance for Telecommunications Industry Solutions, Inc.
All rights reserved.

The Report on Unassigned Number Porting (UNP) dated January 8 , 2001 (former document number INC 01-0108-027) is copyrighted, published and distributed by ATIS on behalf of the Industry Numbering Committee (INC). Except as expressly permitted, no part of this publication may be reproduced or distributed in any form, including electronic media or otherwise, without the prior express written permission of ATIS.

Participants in the INC and other parties are hereby authorized to reproduce this document and distribute it within their own business organizations for business purposes, provided that this notice continues to appear in the reproduced documentation. Resale is prohibited.

For ordering information, please contact:

ATIS
1200 G Street N.W., Suite 500
Washington, DC 20005
(202) 628-6380
inc@atis.org

A complete listing of INC Documents is available on the ATIS Web Site at:
<http://www.atis.org/inc/docs/.asp>



ATIS is the leading technical planning and standards development organization committed to the rapid development of global, market-driven standards for the information, entertainment and communications industry. More than 250 companies actively formulate standards in ATIS' 18 Committees, covering issues including: IPTV, Service Oriented Networks, Energy Efficiency, IP-Based and Wireless Technologies, Quality of Service, and Billing and Operational Support. In addition, numerous Incubators, Focus and Exploratory Groups address emerging industry priorities including "Green", IP Downloadable Security, Next Generation Carrier Interconnect, IPv6 and Convergence.

ATIS is the North American Organizational Partner for the 3rd Generation Partnership Project (3GPP), a member and major U.S. contributor to the International Telecommunication Union (ITU) Radio and Telecommunications' Sectors, and a member of the Inter-American Telecommunication Commission (CITEL). For more information please visit < <http://www.atis.org> >.

The Industry Numbering Committee (INC) provides an open forum to address and resolve industry-wide issues associated with planning, administration, allocation, assignment and use of North American Numbering Plan (NANP) numbering resources within the NANP area.

This document is maintained under the direction of ATIS and the INC. Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, INC Staff, 1200 G Street NW, Suite 500, Washington, DC 20005. All changes to this document shall be made through the INC issue resolution process and adopted by the INC as set forth in the *ATIS Operating Procedures*.

Notice of Disclaimer & Limitation of Liability

The information provided in this document is directed solely to professionals who have the appropriate degree of experience to understand and interpret its contents in accordance with generally accepted engineering or other professional standards and applicable regulations. No recommendation as to products or vendors is made or should be implied.

NO REPRESENTATION OR WARRANTY IS MADE THAT THE INFORMATION IS TECHNICALLY ACCURATE OR SUFFICIENT OR CONFORMS TO ANY STATUTE, GOVERNMENTAL RULE OR REGULATION, AND FURTHER, NO REPRESENTATION OR WARRANTY IS MADE OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. ATIS SHALL NOT BE LIABLE, BEYOND THE AMOUNT OF ANY SUM RECEIVED IN PAYMENT BY ATIS FOR THIS DOCUMENT, WITH RESPECT TO ANY CLAIM, AND IN NO EVENT SHALL ATIS BE LIABLE FOR LOST PROFITS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. ATIS EXPRESSLY ADVISES ANY AND ALL USE OF OR RELIANCE UPON THIS INFORMATION PROVIDED IN THIS DOCUMENT IS AT THE RISK OF THE USER.

NOTE - The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to whether use of an invention covered by patent rights will be required, and if any such use is required no position is taken regarding the validity of this claim or any patent rights in connection therewith.

Table of Contents

1.0 PURPOSE AND SCOPE	5
2.0 DESCRIPTION OF UNP CONCEPT	5
3.0 BACKGROUND	5
4.0 ASSUMPTIONS AND CONSTRAINTS.....	9
5.0 UNP PRINCIPLES	10
6.0 GENERAL UNP PROS AND CONS	11
7.0 UNP APPROACHES	17
7.1 UNP WITHOUT AN ADMINISTRATOR	17
7.2 UNP WITH A MINIMAL ADMINSTRATIVE STRUCTURE.....	24
7.3 UNP WITH AN ADMINISTRATOR.....	31
8.0 CONCLUSION	38

1.0 PURPOSE AND SCOPE

This report defines, describes, and provides an evaluation of the concept of Unassigned Number Porting (UNP) by the industry in response to FCC 00-104, paragraph 231 and resolves INC Issues 177 and 222.

This report provides a current definition of the UNP concept, a history of UNP activity, a set of UNP assumptions and constraints, and a set of UNP principles. It also provides comments on the UNP concept from both the supporters and opponents of UNP.

An open issue regarding the implementation of UNP is whether or not a third party administrator is necessary. This report describes three alternatives:

1. UNP without an administrator,
2. UNP with a minimal administrative structure, or
3. UNP with an administrator

2.0 DESCRIPTION OF UNP CONCEPT

2.1 DEFINITION

Unassigned Number Porting (UNP) is the transfer of one or more available telephone numbers from one LNP-capable service provider (donor) to another LNP-capable service provider (recipient) to serve the same rate area using Location Routing Number technology.¹

2.2 DESCRIPTION

The intent of UNP is two-fold: 1) to fulfill a specific customer request; or 2) to allow a service provider to establish a presence within a rate area (footprint). Both of these applications rely on the use of numbering resources from another SP and presume that the request can be met with less than a full NXX or, in a pooled area, less than a thousands-block. UNP is being proposed as an alternative method of obtaining numbering resources even if full NXXs or thousands-blocks are available from the NANPA or the PA respectively.

3.0 BACKGROUND

Below is a brief summary of the past industry work on UNP and FCC references to unassigned number porting in FCC Orders.

¹ This concept does not change how carriers become LNP capable or how numbers are used within rate area boundaries.

3.1 A CHRONOLOGY OF INDUSTRY WORK ON UNP

3.1.1 North American Numbering Council LNPA Technical & Operational Requirements Task Force Report, dated April 25, 1997

The initial NANC LNPA Selection Working Group meeting occurred on November 8, 1996. One of the functions of the LNPA T&O Task Force was directed to develop technical standards, network interface standards and technical specifications. The North American Numbering Council LNPA Technical & Operational Requirements Task Force Report, dated April 25, 1997 describes the process the T&O Task Force used to satisfy the requirement. Section 10.1.1 of this report includes a recommendation on the porting of unassigned numbers and reserved numbers. Section 10.1.1 reads:

The LNPA T&O Task Force adopted a compromise on the LNP Provisioning Flows...that included endorsing a policy that carriers will not port unassigned numbers unless and until there is an explicit authorization for such porting from a regulator with appropriate jurisdiction. The LNPA T&O Task Force further adopts the Porting of Reserved and Unassigned Number policy developed and documented in Section 7.7 of the "Architecture & Administrative Plan for Local Number Portability."

3.1.2 North American Numbering Council Architecture & Administrative Plan For Local Number Portability

The Architecture and Administration Plan For Local Number Portability was initially developed by the NANC LNP Architecture Task Force, under the NANC Selection Working Group. The Plan was forwarded to the FCC on May 1, 1997 as an attachment to the LNP Selection Working Group Report. The FCC in the LNP Second Report and Order accepted all of the recommendations contained in Issue 1, Revision 3, dated April 25, 1997 of the LNP Architecture and Administration Plan. The Report contains the following statement on the porting of unassigned numbers:

Unassigned number/Unreserved

Service Providers will not port unassigned numbers unless and until there is an explicit authorization for such porting from a regulator with appropriate jurisdiction.

3.1.3 Carrier Liaison Committee Report On Short-term Technical Alternatives to NXX Exhaust (CLC AD Hoc)

In the Carrier Liaison Committee (CLC) Report to the North American Numbering Council (NANC) Short-term Technical Alternatives to NXX Exhaust presented on July 22, 1997 to NANC and revised October 31, 1997, the concept of unassigned

number porting is discussed. The report defines unassigned number porting and assumes that the use of unassigned number porting would be confined to situations where the receiving network either has no NXX assigned to the rate area for which the unassigned numbers are requested, or has exhausted its number resource in that rate area.

The report does not make any recommendation on any of the alternatives.

3.1.4 North American Numbering Council's Number Optimization Report to the FCC

In the North American Numbering Council Report to the FCC entitled *Number Resource Optimization Working Group (NRO-WG) Modified Report to the North American Number Council on Number Optimization Method, Issued 10/98*, the pros and cons of 14 fourteen-optimization measures were examined. UNP was one of the 14 measures discussed in the report. The report states that UNP is a "telephone number (TN) sharing and/or optimization method where available TNs in one service provider's (SP) inventory are ported (using the Location Routing Number [LRN] method) to another SP."

The report states that UNP could be utilized to provide numbers to a service provider who has insufficient numbers available for assignment for a specific customer request for service within a given rate area basis.

The NRO-WG did not make a recommendation on the use of unassigned number porting.

3.1.5 Industry Numbering Committee (INC)

In March 1999, the Industry Numbering Committee (INC) accepted Issue 177 which proposed that the INC study technical alternatives (including attributes) for unassigned number porting (UNP) and determine how numbers would be administered for UNP. In February 2000, the INC accepted Issue 222 to develop a report on UNP.

3.1.6 WorldCom/ FOCAL Communications UNP Presentation to NANC

At the March 2000 NANC meeting WorldCom gave a summary of a UNP trial that they were conducting with Focal Communications. The trial involved the following two scenarios: Scenario 1.) Specific customer requests to port unassigned numbers from one carrier to another and Scenario 2.) Establishing carrier footprints with small quantity of numbers. These scenarios were tested in three cities with forty numbers.

The goals of their trial were to determine if the current LSR process can handle UNP and to determine if a neutral third party administrator was needed. Also, a goal was to determine if internal systems could support UNP.

3.1.7 UNP Ad Hoc Group

In April 2000 a UNP Ad Hoc group was formed to develop "UNP Business Rules" that address the following types of UNP requests:

1. UNP for Footprint
 - Any number/range of numbers within a rate area
 - Any number/range of numbers within a specific NPA and rate area
2. UNP for Customer Specific Number Requests
 - 10 digit numbers
 - Number/Range of Numbers within NPA-NXX
 - Any Number/Range of Numbers within NPA and rate area.

The proposed rules were presented at the September 2000 NANC meeting and submitted as a contribution to the INC (LNPA-342).

3.2 FCC COMMENTS ON THE PORTING OF UNASSIGNED NUMBERS

3.2.1 Second Report & Order in CC Docket 95-116

In paragraphs 52 & 65 of the Order, the FCC discussed the porting of reserved and unassigned numbers. The FCC agreed with the NANC recommendation on the porting of reserved and unassigned numbers. In paragraph 65 of the Order, the FCC addresses the porting of reserved and unassigned numbers. They adopted the NANC's recommendation which is that customers should be allowed to port telephone numbers that they have reserved under a legally enforceable written agreement but that have not been activated and that service providers not be allowed to port unassigned numbers unless and until there is an explicit authorization for such porting from a regulator with appropriate jurisdiction.

3.2.2 Number Resource Optimization Order in CC Docket 99-200

In the Number Resource Optimization (NRO) Order released March 31, 2000 and again on July 20, 2000, the FCC states that UNP and individual telephone number pooling (ITN) are not yet sufficiently developed for adoption as a nationwide numbering resource optimization measures and concludes that ITN and UNP should not be mandated at this time.

They declined to delegate to state commissions the authority to order UNP and ITN in their states. They permit carriers, however, to engage voluntarily in UNP where it is mutually agreeable and where no public safety or network reliability concerns have been identified.

The FCC encourages the states, the National Association of Regulatory Utility Commissioners (NARUC), NANC and INC to continue to study ITN and UNP and forward their recommendations to the FCC by January 1, 2001.

4.0 ASSUMPTIONS AND CONSTRAINTS

1. North American Numbering Plan (NANP) resources are considered a public resource and are not owned by the assignees. Consequently, the resources cannot be sold, brokered, bartered, or leased by the assignee for a fee or other consideration. If a resource is sold, brokered, bartered, or leased for a fee, the resource is subject to reclamation by the North American Numbering Plan Administrator (NANPA).
2. NANP resources are collectively managed by the telecommunications industry with oversight by the regulatory authorities in areas served by the NANP.
3. UNP requires the deployment and service provider implementation of Local Number Portability (LNP) and requires that the switches involved must be LNP-capable and open for LRN portability.
4. The decision to pursue the use of UNP to obtain numbering resources in lieu of the NXX/NXX-X request process is initiated by the recipient SP and will follow the process flows as set forth herein, depending on the architecture chosen.
5. Requests for UNP will be accommodated from a donor provider's inventory of available numbers, as categorized by the FCC in the NRO Order (CC Docket 99-200). No other category of numbers will be used for this purpose.
6. UNP will not be used to accommodate customer requests for number reservations.
7. Service providers are not obligated to donate numbers for the purpose of UNP if the donation will result in the immediate need for the donor SP to request additional numbering resources from the NANPA or PA.
8. Where UNP has been deployed, SPs may still obtain geographic numbering resources in accordance with applicable guidelines.
9. Requesting SPs will activate a TN obtained through the UNP process for the specific customer for whom the TN was originally requested within a guidelines-specified interval following the completion of the port from the donating SP.

10. UNP will follow NANC LNP provisioning process flows, with forms modified to support UNP.
11. UNP will not be industry-segment specific. Although there may be additional considerations unique to particular segments of the industry, UNP must be available to all LNP capable carriers .
12. Implementation of UNP will be subject to applicable state and federal regulatory requirements.
13. UNP will be limited to the fulfillment of specific customer requests or establishment of a footprint in a rate area.

5.0 UNP PRINCIPLES

5.1 UNP ELIGIBILITY PRINCIPLE

SPs who have implemented permanent LNP in accordance with the Telecommunications Act of 1996, and as ordered by FCC Report and Order CC Docket No. 95-116, or other applicable state and/or federal mandate are eligible to participate in UNP where UNP is being deployed. SPs participating in UNP must, at a minimum, be prepared to contribute TNs using the UNP process, in accordance with guidelines.

SPs should not be obligated to convert any switch to LNP capability for the sole purpose of participating in UNP.

5.2 NETWORK RELIABILITY PRINCIPLE

The UNP process must not adversely impact network reliability, performance and public safety.

5.3 UNP IMPACT PRINCIPLE

The implementation of any UNP mechanism or methodology will not impact the functionality of, or schedule for, LNP and pooling as ordered by the FCC or other applicable state and/or federal mandate.

5.4 UNP Uniformity Principle

The inter-company provisioning methodologies, administrative procedures, and interfaces used to support UNP should be uniform nationwide.

5.5 UNP/NPA RELIEF PRINCIPLE

UNP is not to be used in lieu of NPA relief.

5.6 UNP EQUALITY PRINCIPLE

LNP-capable SPs are required to act in both a donor and a recipient capacity.

6.0 GENERAL UNP PROS AND CONS

Members of the industry represented in the INC have different perspectives on the UNP concept. Because of these divergent views, the opinions in this section solely represent the uncontested views of the contributors and not an industry consensus view.

6.1 UNP PROS

6.1.1 Background

The North American Numbering Plan, which serves the telecommunications industry and the public, is under severe stress as a result of the required minimum denomination (10,000 numbers until 1,000 Block number pooling is generally available) in which numbering resources have been assigned since 1945. The requirement to assign numbers by central office code (NPA-NXX) has resulted in many stranded numbers with the addition of popular new telecommunications services and the advent of competition in local markets. The result is that all carriers, and in particular new competitive local service providers attempting to enter new markets, are having difficulty obtaining resources to provide service and offer competition, and consumers are being inconvenienced by frequent area code changes. In addition, both consumers and carriers face greater challenges because of the apparent need to expand the North American Numbering Plan from its present 10-digit format in the relatively near future.

Thousands-Block Pooling can mitigate this denominational problem to some extent assuming timely implementation. Pooling will ensure that the remaining resources in the NANP will be distributed somewhat more efficiently using 1000 numbers as a minimum allocation instead of the current 10,000 numbers. However, it does nothing about the inefficient previous distribution of numbering assets. Nor does Thousand Block Pooling eliminate inefficiencies in distribution logistics since there is no procedure for allocation of numbers in less than one thousand, even though many applications don't require a thousands-block, even over time. What can fill these gaps in numbering policy is Unassigned Number Porting (UNP).

UNP offers:

- 1) a heightened level of number conservation by permitting smaller quantities of telephone numbers rather than a thousand or ten thousand numbers to be used.
- 2) a number optimization technique providing access to numbers that otherwise might remain stranded in service providers' inventories.

- 3) a resource to service providers who have insufficient numbers available for assignment within a given rate area.

6.1.2 Key Assumption

UNP rests upon a single key concept: that unassigned telephone numbers are public resources. It follows, therefore, that telephone numbers are not the private property of the local exchange service provider to whom they are entrusted for assignment to end users. Although this notion is explicitly stated in industry guidelines, numbering resource assignments have been and continue to be treated like permanent grants, in effect, like property. The reason is familiar to those in the industry: telephone numbers have become increasingly valuable assets.

UNP assumes that service providers are custodians of number resources, not owners, and that if a carrier (the requesting carrier) seeks a number or set of numbers assigned to another carrier (the donor carrier), the requesting carrier should be able to obtain the number or numbers unless they have been assigned or are unavailable because of reasons which fall within national guidelines. There are circumstances under which a prospective donor should be able to decline a UNP request, but if a prospective donor is able to always refuse other carriers, the subject numbers become, for all intents and purposes, private property. UNP provides a way to help resolve the conflict between theory and practice in the “management” of numbers.

6.1.3 Reasons to Implement UNP

There are four primary reasons to implement UNP.

6.1.3.1 Access To Underutilized And Trapped Resources

From an administrative and regulatory perspective, UNP enables the mining of numbering resources that might otherwise be stranded within a rate area or within a single carrier’s inventory. Estimates of the numbers that UNP could make available, although arguable, may be as large as the quantity of numbers already put into beneficial use for subscribers.

Resources may become stranded in many ways. Ours is a mobile, rapidly changing society. Subscribers increasingly change service needs, options and providers. Businesses move, grow or fail. Numbers that were assigned become available again, sometimes in large chunks. Providing industry access to such resources will ensure more efficient utilization as the resource becomes more scarce. Consequently, UNP is an important technique for resource conservation and more effective competition.

As with thousands-block pooling, the earlier in the life of an NPA that UNP is introduced, the greater its benefits in deferring or avoiding relief. However, UNP provides access to stranded numbers in all cases: new NPAs; NPAs in jeopardy; and, especially relevant, NPAs that have exhausted.

6.1.3.2 Competitively Neutral Access To Numbering Resources

Competitive local exchange carriers are likely to be both those seeking resources for a footprint in a rate area as well as those with an initial fill rate among their number resources which is lower than that of historical carriers. This means that there is every reason to expect that UNP transactions, especially for footprint requests, will often occur between newer market entrants.

Transactions between a customer's current carrier and that customer's previous carrier for additional number resources which bear a relationship to those that have already been assigned are a logical and necessary extension of Local Number Portability (LNP) which made it possible to change carriers without changing numbers. In such a scenario, if current carriers cannot have access to numbers requested by the customer, assuming those numbers are available, then LNP has not achieved its public policy goal. In addition, customers may seek to trial service with a carrier other than their current service provider, but contingent upon the trial being offered with numbers within their current range.

UNP has the potential to transform carriers from resource owners wielding a weapon in the marketplace into custodians of a public resource.

6.1.3.3 UNP Satisfies Customer Needs

As suggested in the paragraph preceding, UNP plays an important role in enabling carriers to satisfy customer needs for specific numbers. As a specific policy, customer specific requests may be made for any number or set of numbers which a customer could be assigned if the customer were being served by the service provider in whose inventory the resources are held.

Although third in this list, satisfying customer needs is the only path to a competitive telecommunications environment. UNP is premised on the notion that a consumer's choice of service providers should not be based on carriers having differing access to numbering resources because telephone numbers are a public commodity. If customers must shop among carriers based on the carriers' varying access to numbering resources, LNP has failed, and the effort and expense incurred to achieve a more level competitive playing field was wasted.

6.1.3.4 UNP Technology Is Here

The technology to deploy UNP exists already as do the administrative systems to handle number transfers between carriers. Both were developed and deployed for Local Number Portability. UNP simply involves porting a local number not presently assigned to a customer. Although critics suggest that UNP will increase the volumes associated with LNP systems, supporters point out that UNP simply makes good use of costly technology the industry has deployed.

While the technology and administrative systems are already in place, effective use of UNP will almost certainly require a regulatory mandate to end the privatization of numbering resources. Thoughtful regulatory management will be important in getting UNP off on the right foot.

6.1.4 Conclusion

Public policy directed at optimizing the utilization of numbering resources is incomplete without the availability of Unassigned Number Porting. UNP provides a means of sharing numbering resources required below the thousands-block level without abandoning the concept of inventories to provide timely customer satisfaction. It completes the process begun by Local Number Portability of removing access to numbering resources as a barrier to competition. It meets customers' specific needs. Its potential as a number conservation tool promises to defer substantially the need to expand the NANP.

The need to implement UNP quickly is urgent, in view of recent estimates of NANP exhaust. Consequently, those who support UNP urge adoption of a limited administrative apparatus in order to speed implementation as well as contain the already punitive expense of opening the local market (e.g. LNP).

The service providers who support Section 6.1 and recommend prompt deployment of UNP include AT&T, the California Cable Television Association, Cox Communications, and WorldCom.

6.2 UNP CONS

The following points enumerate concerns and potential negative impacts that could arise should UNP ever be mandated. These factors should be considered before any decisions made with regard to implementing UNP on a voluntary or mandated basis. These general comments apply to all UNP approaches outlined in Section 7 of this report.

1. The adoption of mandatory UNP is an acknowledgement that regulators and the industry have not met the numbering needs of the public and the industry. It will also imply that proactive and effective NPA relief planning has not been undertaken. The ideal environment is where SPs obtain adequate resources at all times via 1K pooling or whole NXX

assignments. The benefits of UNP used as a number optimization technique beyond 1K pooling is purely speculative at this time.

2. The UNP concept, if mandated, may lead to issues that may be contrary to the Telecom Act and could promote and encourage collusion and antitrust behavior among SPs. The Telecom Act requires a neutral, third party administrator to perform number administration (e.g., toll-free numbers, CO codes, 1K pooling). If UNP remains voluntary, it could be considered the sharing of resources between service providers. If deemed mandatory, it is the recipient SP performing TN administration on the donor SP's inventory, which may be in violation of the Telecom Act.
3. Once wireless carriers are LNP capable, UNP would be very difficult for that segment of the industry. Wireless carriers typically require instant service activation made available through pre-provisioning. This will not be possible using UNP since it takes more than an hour to complete a UNP transaction through the NPAC databases. For some wireless SPs, operating in an environment where they do not maintain total control over their inventory is unacceptable
4. In most circumstances, new and smaller carriers will become the frequent donors in UNP. This is likely because they have not yet built a large enough customer base to fully utilize NXXs in their inventories.
5. If numbers are not used they are subject to reclamation. Service providers cannot obtain additional numbers unless they meet either the rate center MTE requirements or specific number utilization thresholds. The UNP concept provides an SP the opportunity to obtain numbers by avoiding the normal qualification process. This is a loophole to bypass the required scrutiny of the NANPA and regulators.
6. UNP potentially violates Paragraphs 244-245 of FCC 00-104. If a recipient requests numbers from an unopened block, the donor's sequential number assignment efforts to preserve clean blocks would be rendered moot. In addition, donor efforts to manage TN's within open blocks are pointless due to the impact of unexpected UNP requests. Sequential number assignment (TNs or blocks) would become impossible if other carriers were allowed to randomly take numbers from another's inventory.
7. The ability to obtain resources is tied to an SP's forecasts. Unless their forecasts are consistently over-estimated, SPs that serve as donors end up with fewer numbers than they legitimately forecasted. This will force SPs to either over-forecast or resign themselves to requesting numbers from others via UNP. This is an inefficient process and results in an environment that is contrary to the objective of number optimization.

8. UNP will impact many switches. To the extent that switches will have to handle more ported in numbers, enhancements may be necessary to accommodate additional NPA-NXX combinations. Beyond LNP, UNP will require development of a unique indicator to prevent snapback when the recipient's customer disconnects.
9. UNP may result in greater capacity and performance requirements for NPAC systems. This could be in the form of transactions per second (TPS) as well as a requirement to handle a greater number of records. Depending on the cost recovery method, there may be a requirement to identify ports that are attributable to UNP vs. LNP or other LNP-based functions. The NPAC may need development to support this function. Also, an NPAC transaction charge is applied for each TN that is ported. UNP will increase the number of transactions and thus increase NPAC charges to the industry. It has not yet been determined how such additional costs would be allocated or recovered. UNP may impact LNP system loads since it will increase the quantity of numbers ported. Depending on the size of the increase there may be impacts to SOA, LSMS and NPAC databases.
10. Some degree of manual processing will be required for UNP. This could result in a degradation to the level of customer service now provided. This degradation may be area specific (i.e., customer requesting service in one rate area may be accommodated sooner than customers residing in another rate area). Examples of the types of service degradation are:
 - Increased interaction time between the SP and the customer
 - Increased opportunity for errors in the provisioning process due to manual processes
 - Inability to pre-provision causes delays, as does using the LNP process rather than one's own inventory
11. The donor is paying for the recipient to obtain numbers with no apparent benefit. With LNP the port transaction fees associated with an assigned numbers are somewhat covered because the assigned numbers were generating revenue. With UNP there is no revenue coming to the donor, but the donor pays the port transaction fees to send the numbers to the recipient.
12. This concept is not as simple as it has been portrayed in Section 6.1 because UNP does not, in fact, establish a footprint nor can it simply provide a new presence in a rate center to a carrier. Numbers ported into a new service provider will not necessarily appear in the LERG and it will make trouble-shooting very complex. UNP exacerbates the problems of

LNP. The service provider that receives numbers in a new rate center must be prepared to support E911, etc., in the new rate center.

All the above issues should be addressed and resolved before any decision is made on mandated deployment of the UNP concept. Many of these issues impact the ability of a service provider to compete on a level playing field. The cost, policy, and technical impacts must be decided before any potential positive benefits of UNP could be realized.

7.0 UNP APPROACHES

The sections below on UNP without an Administrator, UNP with a Minimal Administrative Structure, and UNP with an Administrator describe the three approaches and highlight the advantages of each. The descriptions below solely represent the uncontested views of the advocates and therefore not an industry consensus view.

7.1 UNP WITHOUT AN ADMINISTRATOR²

7.1.1 Overview

UNP is an LNP-based mechanism which serves the public interest by optimizing number efficiency and improving local competition. The approach to use UNP without an administrator is intended to provide a mechanism whereby competitively-neutral and increased access to stranded numbers can be achieved in the near-term.

A third party administrator is not required for two reasons: (1) UNP processes are straightforward, using LNP LSR mechanics for donation and capture of requested numbers; and (2) constitutes an unnecessary expense to both carriers and end users. With inter-carrier ordering and porting process preserved as proposed in this approach, existing systems and porting processes are deemed sufficient. Thus, UNP can be implemented through a one-on-one relationship between carriers, much the same as Resale, Unbundled Network Element utilization, Network Interconnection for mutual traffic exchange, and Local Number Portability are being conducted.

A third party administrator is not needed for either the Footprint or Customer Specific UNP-type request. Administration can be accomplished between carriers just as LNP administration is accomplished today. While some might argue that this form of UNP places carriers back into the role of number administration because one SP is relying upon another for footprint numbering

² The approach in this section is consistent with the WorldCom and WorldCom/Cox portions of the NANC UNP Business Rules developed by the UNP Ad-Hoc committee (contribution LNPA-342).

resources, this proposal recognizes that the FCC did not place limits on UNP in its NRO Order (CC Docket, 99-200, Order 00-104) because of this concern. Instead, the FCC expressed interest in the UNP processes. Because this approach relies upon carrier interaction to supply an arguably small supply of numbers, and not to satisfy all forms of resource requests (i.e., all needs for all SPs), this approach does not derive the need for demonstrating need of resource as similarly required for NXX code or thousands block requests. Therefore, the requesting carrier's UNP request based upon their certification of need, for either a footprint need, or to meet a specific customer request, offers the potential for making more efficient use of numbers that might otherwise remain unused in another carrier's inventory. Such an advantage, that overcomes the otherwise required need for an NXX code or thousands block request, can be seen as a benefit.

A third party administrator is also argued in this approach as not being required because audits can be relied upon if there is a need to ensure compliance. Audit tests, if deemed necessary by regulators, can be designed and used to ensure carrier compliance with processes once they are established and uniformly accepted – or mandated. Disputes between carriers can be resolved using existing means; problem escalation processes, existing dispute resolution procedures, or by state regulators. In addition, limiting the total number of telephone numbers per request as proposed herein, is a self governing mechanism that in of itself promotes smaller volumes of requests, creates simplicity and negates the significant costs associated with a third party administrator.

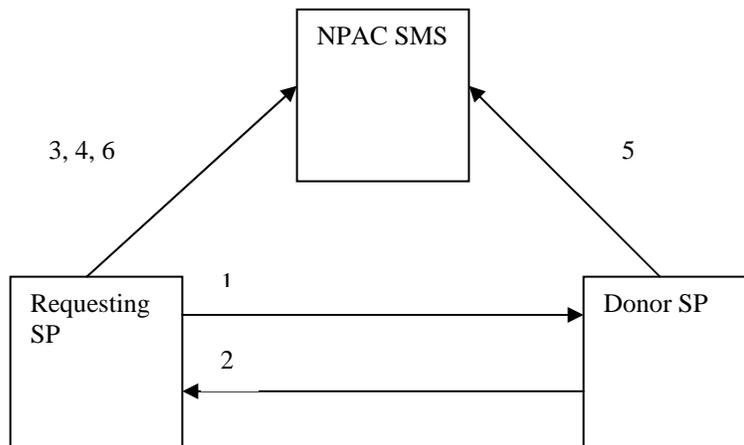
Moreover, certain parties have demonstrated the feasibility of this approach by conducting and reporting to industry concerning the success of a trial to prove the concept indeed functions as asserted.

Functional Description

The following is a high level description of the UNP process without an administrator.

1. Upon determination for the need of a footprint in a rate area for which the carrier is certified but has no resources and the current need for resources is small, or the carrier receives a request by one of its customers for numbers that the carrier does not have but are available from another carrier, the carrier with the need for numbers submits a UNP request LSR;
2. The donor carrier receives the request and responds concerning the availability of the numbers;
3. LNP porting now proceeds as normal;
4. When confirmed available, the requesting carrier submits a "create" message to the NPAC;

5. Optionally, the donor carrier confirms the pending create subscription version in the NPAC;
6. On the due date, the requesting carrier “activates” the telephone number;
7. Testing is performed to ensure that the numbers have been effectively ported.



7.1.2 Types of UNP Requests

UNP requests may be made by a carrier to establish a footprint in a rate area or to meet a specific customer request.

Footprint requests are made to establish carrier presence in a rate area and are limited to one request per rate area. Subsequent or greater needs than the volume allowed for UNP requests, should be met by obtaining blocks or codes. Examples of footprint requests are:

- Any Number/Range of Numbers within rate area
- Any Number/Range of Numbers within specific NPA and rate area

Customer specific requests may be made for any number or set of numbers a customer could be assigned if served by the carrier in whose inventory the resources are held. Customer specific requests have the following attributes:

- 10-digit number(s)
- Any Number/Range of Numbers within NPA-NXX
- Any Number/Range of Numbers within specific NPA and rate area

Customer-specific requests may have the purpose of the end-user seeking to grow the quantity of numbers from those numbers previously ported, or to enable a service “trial” with another carrier using a number range requested by the end-user.

7.1.3 Quantities of UNP Requests

Footprint requests are limited to 25 numbers on a one-time basis.

Although Customer-specific requests in principle should only be limited in theory to the constraints applicable to quantities of numbers customers' would be able to obtain from any potential donor and any appropriate demonstration of need, for the sake of simplicity these requests should be limited to 25 TNs until more experience with UNP is gained.

7.1.4 Qualification for Submitting UNP Requests

Requests for footprint resources must meet the FCC's criteria for resource assignment (certification and ability to serve). Carriers submitting UNP footprint requests shall certify to the donor that they are authorized to provide service and do not have existing resources in the given rate area. The requesting carriers' submission of a request also satisfies that they are able to port and place the numbers into use upon their receipt. A donor carrier may consult the LERG if they chose to determine if the requesting carrier has resources in the rate area requested. Although it may be argued that a carrier might submit multiple footprint requests to multiple carriers at the same time, this method discourages that potential because of the low quantity of TNs per request. This limitation serves as a throttle for those carriers that might otherwise seek to gain advantage in the marketplace. The work effort involved to port the numbers in such small quantities motivates parties to abide by the process. Needs for larger quantities than 25 numbers would be motivated to request pooled thousands blocks or NXX codes.

Carriers submitting UNP Customer-Specific requests shall only submit requests to meet their customer needs. Customer specific requests will not be used to build inventory or to allow numbers to be requested in anticipation of customer requests. Upon request, the identity of the requesting end-user will be provided by the requesting carrier when the UNP request is made.

7.1.5 Donor Identification

Carriers submitting UNP requests pursuant to the footprint case where there is a single donor carrier in the rate area, or when the customer-specific request is for a specific number(s) or a specific NPA-NXX (i.e., single donor) will identify LNP-capable resource holders in the LERG.

The process for determining the donor carrier in multiple donor footprint or customer-specific scenarios shall be resolved by conducting an impartial round robin. The following guidelines could be used to implement this process to determine the UNP donor: (1) decisions by states regulators many of which are proactive in number optimization efforts; or (2) round robin list maintained by

NANPA or Pooling Administrator for the rate area. Either of these entities would satisfy as the party to resolve the UNP request to a single donor. An informal list maintained by the requesting carrier of previous requests to carriers, starting by alphabetical order could also suffice. Finally, for the customer specific scenario, the end-user could be asked to select from the potential list of donor carriers when the request is for a number or range of numbers within a specific NPA and rate area.

The round robin approach performed by the state regulator, the NANPA, or the pooling administrator negates any concern that might be raised about being the recipient of simultaneous requests to other donors. This proposal ensures that only one donor is identified per request. This assurance then, removes the uncertainty about the genuineness of the request that then places an obligation upon the donor to comply.

7.1.6 Processing UNP Requests

Carriers shall submit UNP requests and respond by using existing Local Service Requests (LSR)/Firm Order Confirmation (FOC) forms and porting processes.³ Requesting carriers shall also, as necessary, provide documentation as described in Section 7.1.4 above to verify the request. A single LSR is issued for a footprint UNP request. For customer-specific UNP requests, two LSRs will be issued: a “reservation” LSR is sent to determine whether the number is available, and a porting LSR is then used to initiate the standard porting process.

UNP-specific annotations in the Remarks section will specify the details of the request, whether a specific 10-digit number, a range of numbers within a specific NPA-NXX, or any numbers within an NPA and rate area. The Remarks/Comment field should also contain the tracking number associated with a UNP reservation.

Carriers shall respond to the LSR within 24 hours and, if numbers are available, adhere to the standard porting process and intervals. Donors should not refuse requests unless numbers requested are not available or the donor faces imminent exhaust of its inventory and growth resources are not available.

All parties to UNP transactions shall maintain the documentation associated with all transfers for reference and potential audit.

³ The UNP LSR and Reservation LSR noted here, along with the FOC forms are the standard OBF-agreed forms. As described herein, the Title of the form has been changed to make it explicitly identifiable as a UNP request, and/or to make use of the Remarks portion of the form to provide request specific and transaction response information. Thus additional forms are not deemed required.

7.1.6.1 Process for SP Requesting Footprint UNP

1. Sends Local Service Request – UNP LSR to donor
2. Receives Firm Order Confirmation (FOC) including tracking number in Remarks field from donor identifying which TNs are available and being held.
3. Upon receipt of FOC, sends Create message to NPAC
4. On LSR due date, sends Activate message to NPAC
5. Makes test calls from major carriers
6. Makes test calls from within new receiving switch
7. Has donating SP make test calls from donor switch
8. Verifies all test calls complete to receiving switch (new requesting SP)

7.1.6.2 Process for SP Donating Footprint UNP

1. Receives LSR for UNP
2. Returns Firm Order Confirmation (FOC) that TNs are available with identification (tracking number included in remarks)
3. Optionally, sends Create concurrence message to NPAC (LNP process proceeds normally)
4. Makes test calls, per new SP, from donor switch.

7.1.6.3 Process for SP Requesting Customer-Specific UNP

1. Sends Reservation Local Service Request (LSR) for UNP
2. Receives Firm Order Confirmation (FOC) including tracking number in Remarks field that TNs are reserved for requesting SP
3. Sends LSR for UNP with tracking number from previous FOC and customer due date
4. Upon receipt of FOC, sends Create message to NPAC
5. On customer due date, sends Activate message to NPAC
6. Makes test calls from major carriers
7. Makes test calls from within new receiving switch
8. Has donating SP make test calls from donor switch
9. Verifies all test calls complete to receiving switch (new requesting SP)

7.1.6.4 Process for SP Donating Customer-Specific UNP

1. Receives Reservation LSR for UNP
2. Returns FOC that TNs are reserved for request (include tracking number in Remarks)
3. Receives LSR for UNP with tracking number from previous FOC and customer due date

4. Returns FOC for LSR for UNP
5. Optionally, sends Create concurrence message to NPAC
6. Makes test calls, per new SP, from donor switch

7.1.7 Report and Categorization of UNP Numbers

Any number available for assignment to a customer is eligible for UNP.

7.1.7.1 Footprint Numbers

The recipient carrier should treat numbers received from footprint requests as new inventory and classify them as *available* for reporting purposes until they are *assigned* or *reserved* for a customer. The donor carrier should also remove the UNP ported TNs from its number resource inventory at the time of donation.

The donor carrier should remove numbers donated for footprint from its inventory using the same process as numbers removed from inventory when donated to the pooling administrator.

7.1.7.2 Customer-Specific Numbers

The recipient carrier has no reporting responsibility. For the donor, the primary category is *assigned*, and the secondary category is *ported out*.

7.1.8 Audits and Dispute Resolution

Audits can serve to validate that the process of UNP is working as intended. The low quantity of numbers suggested herein for UNP requests is specifically intended to alleviate the need for a high volume of audits. Because the quantities of TNs in a UNP requests will be small, this shall serve as a disincentive for those who might otherwise seek additional resources to the detriment of efficient number optimization.

While national procedures do not currently envision UNP audits, this is not surprising because UNP has not matured to become a normative industry process. Notwithstanding the current lack of regulatory mandate for UNP, this approach promotes that audits of carrier inventories performed for example, by state regulator, third party auditors, or other entities determined by regulatory mandate for other reasons can also include auditing a carrier's UNP activity. This process will serve as adequate and appropriate verification of UNP ported-out/ported-in numbers.

"Random" audits of number inventories, for example, triggered by any reason, should incorporate an audit of the carrier's UNP records.

In addition, “For Cause” audits can be triggered by NANPA, state regulators or by customer complaints as processed by and under the cognizance of regulatory authorities.

There is a presumed obligation upon both carriers, recipient and donor, to cooperate with UNP audits. It is the responsibility of individual carriers to maintain logs of UNP requests and disposition for any audit purposes.

Complaints by carriers concerning UNP should be referred to the appropriate regulatory agency, in most cases, a state commission. State commissions have the authority to conduct audits to determine the facts in any dispute concerning numbers.

7.2 UNP WITH A MINIMAL ADMINISTRATIVE STRUCTURE

7.2.1 Overview

UNP could be provided under a wide variety of administrative structures. The approach taken here proposes a minimal administrative burden in order to hasten implementation and avoid unnecessary costs. There are existing agencies that have a role to play in making UNP happen, such as state regulatory agencies, and nascent entities, such as a pooling administrator, that will be well-positioned to assume limited UNP functions consonant with their regular role. This approach is premised on the notion that a consumer’s choice of a service provider should not be based on differing access to numbering resources among carriers because telephone numbers are a public commodity.

Insistence upon an administrator comes from parties who treat numbering resources as though numbers were carrier-specific property rather than a public resource. When such carriers begin to treat numbering resources as stewards exercising the responsibility implied in their Certificates of Public Convenience and Necessity, most UNP transfers should become routinely voluntary transactions. However, a regulatory mandate will be required to effect such a change.

Carriers today employ their number administration systems to perform Local Number Portability (LNP) to transfer a customer’s number from one carrier to another. The same systems will enable carriers to process the transfer of TNs that have not been assigned to customers, that is the UNP process, described in further detail below. As has been demonstrated in field trials UNP presents no technical challenge whatsoever.

Customer-specific requests which usually involve specific number combinations are ordinarily obtainable from a single source that can be identified in the Local Exchange Routing Guide (LERG). Such requests can be handled with minimal effort on a bilateral basis through a direct request to the donor as identified from the LERG. Only if the request or its refusal is contested will the request be

referred to the pooling administrator (PA). In the event that the parties do not agree to the PA's proposed resolution, the dispute will be referred to state regulatory agencies and be handled much as interconnection agreement disputes have for several years.

When a pooling administrator (PA) is operational, requests for small groups of numbers to establish service in a rate area (footprint UNP requests) will be submitted to the pooling administrator who will resolve the issue in one of these ways: a) conduct a round robin of eligible candidates; b) set aside numbers to meet low volumes of footprint requests. The PA will have access to NRUF data to help identify likely donors. Until a pooling administrator is available, donors for footprint requests will be identified by the requesting carrier from among LNP-capable carriers identified in the LERG as having substantial resources in that rate area.

7.2.2 Types of UNP Requests

UNP requests may be made by a carrier to establish a footprint in a rate area or to meet a specific customer request.

Footprint requests are made to establish carrier presence in a rate area and are limited to one request per rate area. Subsequent needs should be met by obtaining blocks or codes. Carriers that anticipate eventually needing more resources than can be obtained with a UNP footprint request should request a pooled block at the outset.

Customer specific requests may be made for any number or set of numbers a customer could be assigned if served by the carrier in whose inventory the resources are held. It is anticipated that many of these requests will be for additional numbers to supplement previously ported numbers reducing the likelihood of certification questions arising.

7.2.3 Quantities of UNP Requests

Footprint requests are limited to 25-50 numbers on a one-time basis.

Although customer-specific requests should only be limited in theory to the constraints applicable to donor customers and any appropriate demonstration of need, for the sake of simplicity these requests should be limited to 100 TNs until more experience with UNP is gained.

7.2.4 Qualification for Submitting UNP Requests

Requests for footprint resources must meet the FCC's criteria for resource assignment (certification and ability to serve). Requests pursuant to specific customer requests may presume to meet FCC criteria provided the carrier has resources assigned in the relevant rate area as shown in the LERG or has ported

numbers in the rate area as identified in the NPAC. Otherwise, such request must meet the FCC's criteria for resource assignment.

It is anticipated that many customer-specific requests will be for additional numbers to supplement previously ported numbers, reducing the likelihood of certification issues arising.

7.2.5 Donor Identification

Customer Specific Requests

Donors pursuant to customer-specific requests are identified in the Local Exchange Routing Guide.

Footprint Requests

When a pooling administrator is operational, requests for small groups of numbers to establish service in a rate area could be submitted to the pooling administrator who could resolve the issue in one of these ways:

- a) conduct a round robin of eligible candidates;
- b) set aside numbers to meet low volumes of footprint requests.

The PA will track requests and verify number availability before responding to the requesting SP.

If circumstances prevent a requesting carrier from obtaining footprint resources from the pool, the carrier may apply to any carrier in the rate area who might have embedded resources available, as indicated in the LERG.

Until a pooling administrator is available, donors for footprint requests will be identified by the requesting carrier from among LNP-capable carriers identified in the LERG as having substantial resources in that rate area.

If requests are declined by all potential donors, the requesting carrier may seek relief from the appropriate regulatory agency which will either select the most appropriate donor or deny the request. If the request is denied the requesting carrier will have available a request for a 1K Block of TNs from the Interim Pooling Administrator.

7.2.6 Processing UNP Requests

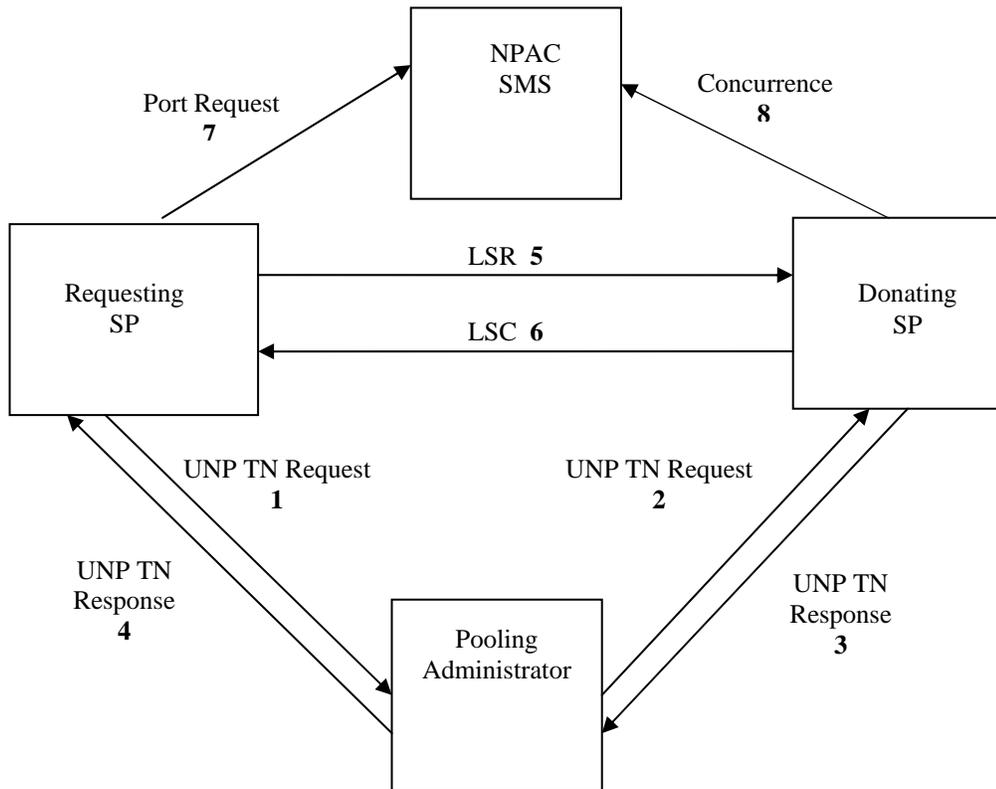
Carriers shall request UNP and respond by using existing Local Service Requests (LSR)/Local Service Confirmation (LSC) forms and porting processes. Requesting carriers shall also, as necessary, provide documentation as described in Section 3.4 above to verify the request. A single LSR is issued for a footprint UNP request to the SP identified by the PA as donor. For customer-specific UNP requests, two LSRs will be issued: a "reservation" LSR is sent to determine whether the number is available, and a porting LSR is then used to initiate the standard porting process.

UNP-specific annotations in the Remarks section will specify the details of the request, whether a specific 10-digit number, a range of numbers within a specific NPA-NXX, or any numbers within an NPA and rate area. The Remarks/Comment field should also contain the tracking number associated with a UNP reservation.

Carriers shall respond to the LSR within 24 hours and, if numbers are available, adhere to the standard porting process and intervals. Donors should not refuse requests unless the numbers requested are not available or the donor faces imminent exhaust of its inventory and growth resources are not available.

All parties to UNP transactions shall maintain the documentation associated with all transfers for reference and potential audit.

7.2.6.1 Footprint Request Overview



A UNP request for footprint will follow the above flow. Requesting SPs will make footprint requests via the PA. Once an available donor is confirmed, the normal porting process will commence.

7.2.6.2 Process for SP Requesting Footprint UNP

1. Sends request to PA
2. Receives donor ID from PA
3. Sends Local Service Request – UNP LSR
4. Receives LSC identifying which TNs are available and being held.
5. Upon receipt of LSC, sends Create message to NPAC
6. On LSR due date, sends Activate message to NPAC
7. Makes test calls from major carriers
8. Makes test calls from within new receiving switch
9. Has donating SP make test calls from donor switch
10. Verifies all test calls complete to receiving switch (new requesting SP)

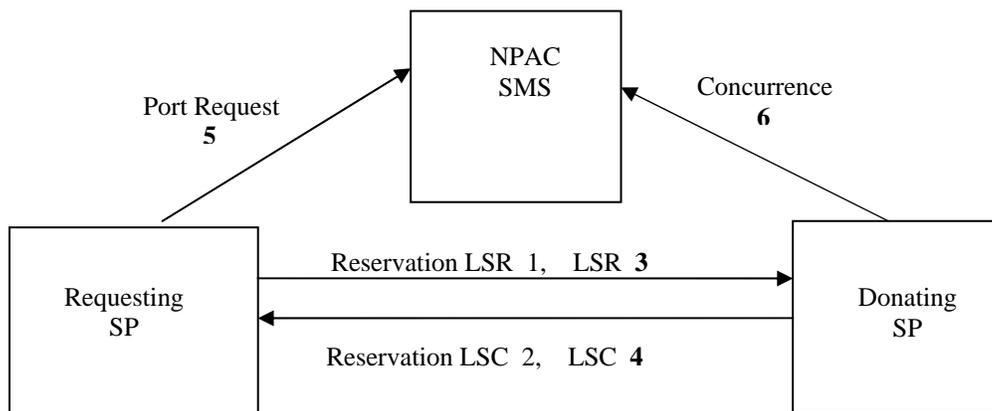
7.2.6.3 Process for SP Donating Footprint UNP

1. Receives request from PA
2. Responds back to PA
3. Receives LSR for UNP
4. Returns confirmation (LSC) that TNs are available with identification (tracking number included in remarks)
5. Sends Create concurrence message to NPAC (LNP process proceeds normally)
6. Makes test calls, per new SP, from donor switch.

7.2.6.4 Process for PA in Footprint UNP

1. Receives request from SP desiring footprint
2. Chooses potential donor according to guidelines
3. Verifies availability with potential donor
4. Informs requestor of donor identity

7.2.6.5 Customer Specific Request Overview



A UNP customer-specific request will follow the normal porting process, with the addition of an LSR reservation request and LSC. It is assumed that the NPA-NXX is known for this request.

7.2.6.6 Process for SP Requesting Customer-Specific UNP

1. Sends Reservation Local Service Request (LSR) for UNP
2. Receives LSC that TNs reserved for requesting SP
3. Sends LSR for UNP with tracking number from previous LSC and customer due date
4. Upon receipt of LSC, sends Create message to NPAC
5. On customer due date, sends Activate message to NPAC
6. Makes test calls from major carriers
7. Makes test calls from within new receiving switch
8. Has donating SP make test calls from donor switch
9. Verifies all test calls complete to receiving switch (new requesting SP)

7.2.6.7 Process for SP Donating Customer-Specific UNP

1. Receives Reservation LSR for UNP
2. Returns LSC that TNs are reserved for request (include tracking number in Remarks)
3. Receives LSR for UNP with tracking number from previous LSC and customer due date
4. Returns LSC for LSR for UNP
5. Sends Create concurrence message to NPAC
6. Makes test calls, per new SP, from donor switch

7.2.7 Reporting and Categorization of UNP Numbers

Any number available for assignment to a customer is eligible for UNP.

7.2.7.1 Footprint Numbers

The recipient carrier should treat numbers received from footprint requests as new inventory and classify them as *available* for reporting purposes until they are *assigned* or *reserved* for a customer.

The donor carrier should remove numbers donated for footprint from its inventory in the same manner as numbers donated to a pooling administrator.

7.2.7.2 Customer-Specific Numbers

The recipient carrier has no reporting responsibility. For the donor, the primary category is *assigned*, and the secondary category is *ported out*.

7.2.8 Audits and Dispute Resolution

Random audits of number inventories should incorporate UNP transactions to ensure that the process is working as intended and that numbers are properly categorized. Carriers should maintain all documentation associated with UNP for at least 5 years and cooperate with any audit.

The National Pooling Administrator (PA) will manage UNP requests for footprint resources in a rate area and attempt to resolve disputes among pooling service providers. The process described in 3.5 will be used by the PA to select a donor for footprint requests. Disputes that the Pooling Administrator is unable to resolve should be referred to the appropriate regulatory agency.

Complaints by carriers concerning UNP should be referred to the appropriate regulatory agency, in most cases, a state commission. State commissions have the authority to conduct audits to determine the facts in any dispute concerning numbers.

7.2.9 Advantages of UNP Process with a Minimal Administrative Structure

This proposal is an implementation of UNP that incorporates third party oversight without requiring the involvement of a full-fledged administrator in each UNP transaction. Both sides of the current industry discussion on the need for a third party administrator were considered in developing this proposal, and it is offered in an attempt to exploit the strengths of each side. This proposal offers a process for the quick implementation of UNP and avoids unnecessary costs.

7.2.9.1 Rapid Deployment

The more quickly Unassigned Number Porting is deployed, the sooner its benefits will be available to the industry and the public. Like other conservation measures, the earlier it is introduced in the life of an NPA, the greater the potential for number optimization. (This should not be construed to mean that UNP is not useful in an NPA with a shorter life span. Any optimization measure that liberates stranded numbers in existing NPAs has a high degree of utility.) A national UNP administration will require a lengthy bidding process including requirements, and, if disputes arise in the process, resolution could take several years. The process described above will take advantage of established administrative structures such as state regulatory agencies, as well as nascent entities such as a pooling administrator when one is established. However, UNP can be implemented immediately.

7.2.9.2 Simplicity

The direct process described above between requesting carriers and potential donors using existing intercarrier systems and procedures, as well as relying upon regulatory agencies who already exercise local jurisdiction is far more reasonable, straightforward and simple than elaborate protocols that will result in a cumbersome process – designed to be inefficient.

7.2.9.3 Minimizes Costs

The telecommunications industry has paid a high price for the opening of the local exchange market in such things as the Local Number Portability apparatus, not to mention the litigation of interconnection agreements and a multitude of other issues. The NANPA is not an insignificant cost to the industry, and now the FCC is preparing to establish another national operation to administer a thousands-block pooling process. The list of the burdens a telecommunications provider must shoulder and eventually pass on to the public continues to grow. Any procedure which can avoid additional administrative cost deserves a chance.

Moreover, the UNP approach with minimal administrative needs is far less costly than other measures that maximize existing resources and open NNX and NPA codes, such as individual telephone number pooling and geographic portability,

7.2.9.4 Uses Existing Administrative Resources

A new agency or operation would require, in addition to the bidding and award process, a period for training and ramp up. State regulatory agencies, on the other hand, bring considerable knowledge of the industry and issues to manage any disputes that arise, and they may be frequent at the outset. The burden on state agencies should be transient and occasional. After all, UNP transfers should happen between carriers much as Resale, Unbundled Network Element utilization, Network Interconnection for mutual traffic exchange, and Local Number Portability are conducted.

The use of the pooling administrator to manage footprint requests in a particular rate area and consider disputes among pooling carriers makes good use of the pooling administrator's rate area expertise and is incidental to the pooling administrator's other responsibilities.

Finally, the regime of audits contemplated for numbering resources should include UNP with the aim of deterring improper use of UNP either to gain resources or withhold them. State commissions have the authority to conduct audits to determine the facts in any dispute concerning numbers.

7.3 UNP WITH AN ADMINISTRATOR

The quantity of potential UNP participants is literally every LNP-capable service provider within a particular area. In addition, despite claims to the contrary, there is no way of ensuring that UNP volumes can be kept to a minimum. Consequently, a neutral third party⁴ is essential to:

⁴ This proposal makes no assertion as to whether a new administrator is required, or whether an existing administrator, such as the NANPA or the national Pooling Administrator, should assume this responsibility.

1. track available numbers within each provider's inventory
2. collect FCC-required evidence of certification and readiness for initial (footprint) numbering resources
3. check the validity, accuracy and appropriateness of the UNP requests submitted (both footprint and customer specific requests)
4. select the donor provider in a fair and impartial manner
5. manage any disputes that may arise during the porting process
6. provide reports and any other information regarding UNP activity to other numbering administrators and regulatory entities

UNP involves a form of number administration, whereby one entity relies upon another to provide them with the numbering resources needed to establish or augment service for the customer. The FCC took specific measures to migrate number administration to a neutral third party to ensure fair access to numbers by all competing carriers. Similarly, a neutral third party handles administration for 800 service. In addition, a neutral third party oversees the porting of numbers between wireline SPs. Once wireless SPs become LNP-capable, they will also rely on third party oversight not only for the porting process itself, but also for the Mobile Subscriber Identification (MSID) administration. Absent a third party administrator, UNP puts donor carriers back into the role of number administration. In addition, it is generally acknowledged that certain numbers have a significant value to certain customers and their service providers. In today's competitive environment, as well as an environment in which numbering resources are becoming increasingly scarce, absent an administrator, UNP will provide certain carriers with an incentive to secure numbers that they are otherwise not entitled to. To prevent this, proof of actual need should be submitted by every requesting carrier. By the same token, justification for any refusal should be provided by donor carriers. It is acknowledged, however, that such proof/justification must be treated as extremely confidential information and thus should be reviewed only by a neutral third party. State and federal regulators have neither the time nor resources to conduct the necessary reviews of each request, nor monitor general compliance with UNP rules or guidelines. Absent a third party administrator, regulators will be inundated with complaints, both from requesting SPs every time a request is denied, and from donor SPs who feel that they are being unfairly targeted for porting.

7.3.1 Functional Description

The following is a high level description of the UNP process with an Administrator.

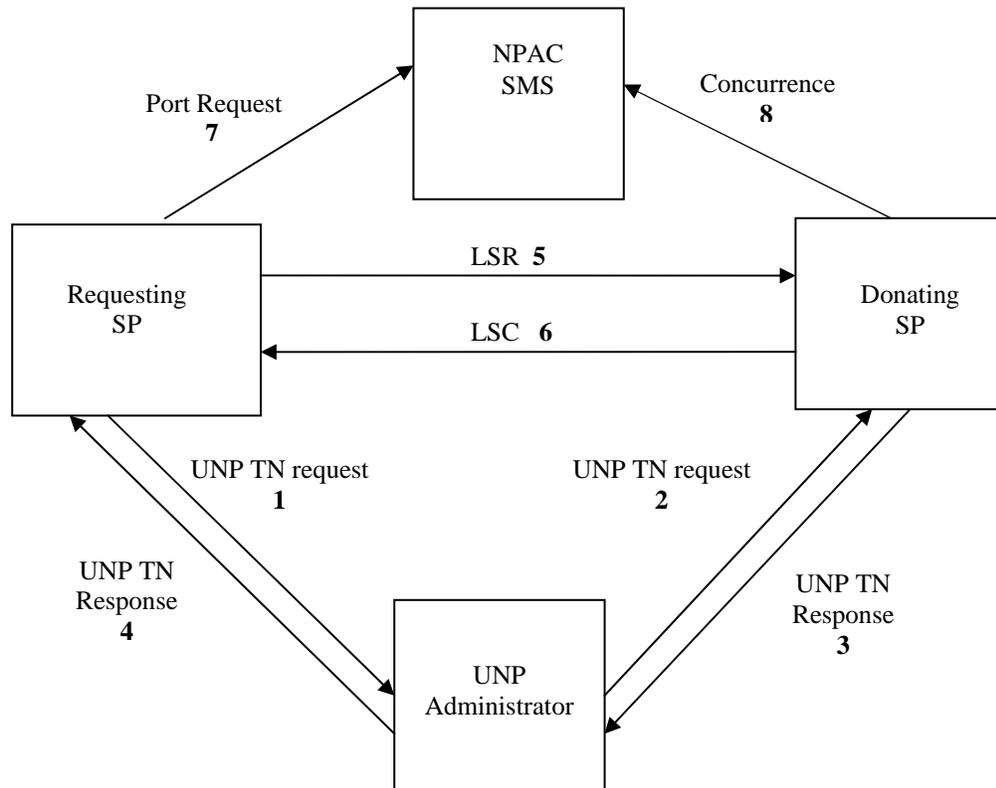


Figure 1.1 – Unassigned Number Porting General Process Flow

Prior to porting an unassigned number, all participating SPs should provide the UNP Administrator with the identity of TNs available in each rate area, on a monthly basis⁵. The actual porting of unassigned numbers proceeds as follows:

- When an SP requests unassigned numbers to port for either a specific customer or to establish a footprint (1), the Administrator will review the validity of the request from data submitted in accordance with yet-to-be-developed guidelines. In addition, for footprint requests, the Administrator

⁵ The purpose is to provide the UNP Coordinator with an initial indication of which carriers may have numbering resources which could accommodate the request. Only the selected (potential) donor can make the final determination of whether the requested number(s) is actually available. It is recognized that monthly reports are of limited utility in determining which numbers are available on any given date. However, a proper balance must be achieved between providing the Coordinator with insight into the availability of requested numbers and limiting the reporting burden on participating carriers. If UNP is used as a long-term number administration mechanism, a mechanized, near real-time access capability to carrier inventories must be developed and deployed.

will obtain and validate the FCC-required state certification and readiness proof. Upon completion of the validation process, the Administrator will use the information in the TN availability reports to select a candidate donor.

- The Administrator relays the request to the candidate donor. The candidate donor determines if there are available TN's to meet the request. If TNs are available, the Donor, will place them in a special set-aside category in its systems⁶ (e.g.: TN administration, billing and switching systems) (2). The interval required for this step must be addressed in the guidelines.
- When the candidate donor confirms that TNs are available to meet the request, it provides to the Administrator a response (within one business day) containing the specific TNs to be used to meet the request. (3)
- The Administrator relays the response to the requesting SP. (4)
- The requesting SP then sends a Local Service Request (LSR) to the donor requesting the numbers be ported. (5)
- The Donor returns a Local Service Confirmation (LSC).(6)
- On receipt of the LSC, the requesting SP sends a port request to the NPAC SMS.(7)
- The Donor sends port request with concurrence to the NPAC SMS.(8).

Following these steps, consistent with standard LNP processing, the requesting SP sends a port activation to the NPAC SMS. The NPAC SMS then broadcasts the LNP routing information for the ported TNs to the industry.

7.3.2 Detailed Description of UNP Processes

1) Available Number Information

Each participating SP within the UNP area should provide, on a monthly basis, a list of all available TNs in each rate center. The UNP Administrator will use these lists to determine candidate donor SPs for meeting a UNP request. It is acknowledged that such information is only a snapshot view of available numbering resources at the date and time the report is created. In some rate centers, this information will become quickly outdated. In others, the status of numbers may remain static for long periods of time. In either situation, submission of these available TN lists will prove vastly superior to reliance on NRUF data, which is produced only twice yearly and doesn't identify the actual numbers that are available for UNP.

⁶ This may require the approval and development of a new category or subcategory under the FCC's NRO Order rules.

2) Request Validation

If the UNP request is customer-specific, it must be submitted to the UNP Administrator and accompanied by documentation that includes 1) customer name and address; 2) type or class of service being requested (e.g., POTS, DID, Centrex, etc.); 3) the nature of the customer's request (e.g., simple preference or actual technical necessity); and 4) the reason the requesting SP cannot meet the customer's need using its own inventory. Service providers submitting UNP footprint requests must provide the necessary certification and readiness information as required per the FCC's NRO Order⁷, as well as certify to the UNP Administrator that this is the first and only (footprint) request made within the particular rate area. Using this information, the UNP Administrator will determine the validity of the request using yet-to-be-developed industry guidelines. The Administrator will also determine whether a donor is obligated to open a new thousands-block (under FCC SNA rules) to meet the request.

3) Donor Selection

The UNP Administrator shall examine the Available Number Reports submitted by participating SPs to identify one or more potential donors. If more than one potential donor is identified, the UNP Administrator will select a potential donor using a rotational ("Round Robin") approach to ensure that no donor is burdened to a greater extent than others. This same process will be re-employed if the selected donor denies the request (for an approved reason).

4) Refusal Validation

A carrier selected for a UNP request must respond to the UNP Administrator within one business day as to whether it can honor the request or must deny it. An explanation must be provided if the request is denied. Acceptable reasons for denial include 1) the requested number(s) is no longer available; 2) the donor's inventory is critically low with little or no opportunity to replenish it in a timely manner (criteria to be developed); 3) the total quantity of numbers requested of it within the (pooled) rate area by all carriers has exceeded the yet-to-be-determined maximum quantity permitted within the quarter; or 4) the request requires opening a new block, yet it does not meet the criteria (Note: when forwarding the request to each candidate donor, the UNP Administrator will determine and indicate whether the request is for technical reasons or simply customer preferences.)

5) Dispute Resolution/Arbitration

Use of an Administrator, which is obligated to adhere to the yet-to-be-developed UNP guidelines and track each UNP request, should eliminate most of the

⁷ See paragraph 97, FCC 00-104, released March 31, 2000

potential for disputes or need for arbitration. SPs (either requesting SPs or donor SPs) that believe they have been disadvantaged should first seek resolution through the UNP Administrator. If satisfactory resolution is not achieved, the SP may file a complaint with the appropriate regulatory entity. The UNP Administrator will provide documentation of its involvement and related activity to the regulatory entity. This will facilitate prompt and equitable resolution of any such complaints.

6) Reporting

The UNP Administrator will provide (monthly or quarterly) reports, as needed on UNP activity within the (UNP) portability area. Such reports should provide information on the quantity of UNP requests submitted, broken down by footprint versus customer-specific, the quantity of requests filled (and the quantity of LNP ports required), and the quantity denied. Information on the average size of each request, common reasons for submitting requests and common reasons for denials, would be helpful as well. The UNP Administrator will also respond to specific requests for information from authorized parties.

7.3.3 Advantages of UNP with an Administrator

- A) A full-time UNP Administrator ensures that number administration remains under control of a neutral third party

UNP involves a form of number administration whereby one SP relies upon another to provide them numbers needed to establish or augment service for the customer. The FCC took specific measures to migrate number administration to a neutral third party to ensure fair access to numbers by all competing carriers. The presence of a full time UNP Administrator maintains this neutrality.

- B) Self-Certification is unnecessary

In its *NRO Order*, the FCC rejected the notion of self-certification and instead mandated a process that requires SPs to demonstrate that they need numbering resources to provide services⁸. Use of a full-time UNP Administrator can ensure compliance with the new FCC rules.

- C) Compliance with UNP rules for footprint requests is assured

Donor SPs have no way of independently verifying that requests for footprint resources are submitted only once by a particular SP, for a particular rate area. The Local Exchange Routing Guide (LERG) lacks the granularity to identify ownership below the thousands-block (NXX-X) level. As such, if no administrator was present, a requesting SP could repeatedly submit requests for footprint

⁸ Paragraph 88, FCC 00-104, released March 31, 2000.

numbers within the same rate area, without anyone being aware of it. A full-time administrator eliminates this possibility.

- D) Identification of potential donors becomes the responsibility of a neutral third party

This alternative proposes that the UNP Administrator maintain monthly lists of available numbers held by each SP. This will take much of the guess work out of identifying potential donor SPs and also ensures a fair distribution of donor responsibilities.

- E) Legitimacy of requests, as well as denials, can be assured

In today's competitive environment, as well as one in which access to additional numbers is becoming increasingly more restrictive, UNP may compel certain SPs to seek numbers that they are otherwise not entitled to. Use of a full-time UNP Administrator can help ensure that requests are submitted only in situations where the need cannot be met from the requesting SP's own inventory. This will be accomplished by the Administrator's review of the supporting documentation submitted by the requesting SP. By the same token, the UNP Administrator can review the reasonableness of any denial by potential donors. In both situations, SPs will be more willing to provide the needed proof, in confidence, to the neutral third party.

- F) Little need to engage state commissions in resolving disputes

Use of a full-time Administrator will eliminate most of the potential for disputes or arbitration. With a full-time Administrator present, participating SPs will have a high level of assurance that the requests submitted for UNP are legitimate and are processed in an expeditious manner. They will also be assured that any denials are for legitimate reasons.

- G) Little need for audits

Use of a full-time Administrator, who will have near real-time access to all necessary documentation, eliminates the need for random audits. Claims that random audits of SP inventories will suffice in ensuring compliance with UNP rules are unfounded and unrealistic. The current national audit requirements contain no provisions for audits for the purpose of UNP administration. Even if they were included, such audits, by their random nature,

8.0 CONCLUSION

INC's study of the UNP concept has defined the subject, developed principles, described assumptions and constraints, shown various potential approaches to implementing UNP, and evaluated the concept. In summary, there are significant differences of opinion in the industry on whether UNP should be deployed and, if it should, by what methodology. This report documents the essential elements of these views.

Due to these differences, no consensus recommendation can be made at this time. The INC submits this report as part of the public record to be considered by the FCC on this subject and considers this report as having met the FCC's request in the NRO Order (CC Docket 99-200, FCC 00-104 ¶231).