

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of:
Local Number Portability Database
Platforms

WC Docket No. 09-109
WC Docket No. 07-149
WC Docket No. 95-116

**COMMENTS OF THE CALIFORNIA PUBLIC UTILITIES COMMISSION AND
THE PEOPLE OF THE STATE OF CALIFORNIA**

HELEN M. MICKIEWICZ

505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-1319
Fax: (415) 703-4592

Attorneys for the California
Public Utilities Commission and
The People of the State of
California

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The California Public Utilities Commission and the People of the State of California and (CPUC or California) respectfully submit these comments in response to the Public Notice, released October 14, 2011, in which the Federal Communications Commission (FCC or Commission) seeks comments on specifications and terms for the development of a next-generation Number Portability Administration Center/Service Management System (NPAC/SMS).

The CPUC is submitting limited comments in response to the Public Notice. In brief, California proposes that state commission access to the porting data should be a required element in the development of a new system.

I. BACKGROUND

The FCC ordered carriers to deploy Local Number Portability (LNP) in 1997.¹ Concurrent with the deployment of LNP, and pursuant to the FCC's mandate, the Number Portability Administration Center (NPAC) was established. The NPAC comprises a system enabling the routing of calls from and to ported numbers through use of a massive data base. Calls to ported numbers are routed through the NPAC, which contains information about the initial carrier to which the number was assigned and the new carrier to which the number was ported. Because the data base contains all information necessary for routing calls to ported numbers, the NPAC is a repository of

¹ FCC, NEWS Report No. CC 97-43, August 18, 1997.

information regarding which numbers are ported and to which service providers these numbers are ported.²

The information in the NPAC data base has been available to the states through special report requests. In October 2011, the CPUC's Communications Division requested information from the NPAC on port-ins and port-outs for a specified set of facilities-based wireless service providers. The CPUC sought the information in connection with its open investigation into the proposed merger of AT&T and T-Mobile.³ The NPAC refused to provide the CPUC with the port-in and port-out data, claiming that it could not make the information available without a specific data request propounded on each service provider for which the data was sought.

² In its *NRO Report and Order (In the Matter of Numbering Resource Optimization, Report and Order and Further Notice of Proposed Rulemaking*, FCC 00-104), the FCC described the routing process as follows:

When an individual telephone number is ported, a record associating the ported number with the Location Routing Number of the appropriate service provider's switch is created and stored in the former carrier's LNP service control point (SCP) database, via downloads from the local Service Management System (SMS). Local SMSs (LSMSs) are the databases that carriers will regularly access to obtain information on ported telephone numbers. The Number Portability Administration Center (NPAC) SMSs are the regional databases maintained by the local number portability administrators, which contain the lists of ported telephone numbers and associated LRNs. These lists of ported numbers and LRNs are periodically transmitted from the NPAC SMSs to the LSMSs, and then downloaded to network SCPs for call processing. Telephone Number Portability, *Second Report and Order*, CC Docket No. 95-116, 12 FCC Rcd 12281, 12288 (1997) (*Telephone Number Portability Second Report and Order*). Any service provider routing a call to the ported number would do so by querying the database to determine the LRN that corresponds to the dialed telephone number, and routing the call to the switch identified by that LRN. See generally *Id.* at 12287. See also *Notice*, 14 FCC Rcd at 10381-83. The LRN method was initially recommended by the industry and state/regional workshops, and adopted by the Commission in *Telephone Number Portability Second Report and Order*, 12 FCC Rcd at 12283.

NRO Report and Order, ¶ 117, fn. 238

³ *Order Instituting Investigation on the Commission's Own Motion Into the Planned Purchase and Acquisition by AT&T Inc. of T-Mobile USA, Inc., and its Effect on the California Ratepayers and the California Economy*, I.11-06-009, Filed June 9, 2011.

Following deployment of LNP, the FCC mandated bi-annual reporting of number resources utilization effective June 30, 2000. When the FCC developed the categories of numbers in carrier inventories which carriers must report via the Numbering Resource Utilization and Forecast (NRUF), the FCC expressly chose not to create a separate category for ported numbers.

We also conclude that number ported for the purpose of transferring an established customer's service to another carrier should be categorized as *assigned numbers*. . . . we conclude that the donating carrier should classify *ported-out* numbers as *assigned numbers*, while the receiving carrier should not classify these numbers in any of our six defined primary categories. By requiring only that the porting-out carrier report these numbers, we also seek to avoid double counting.⁴ [Original emphasis.]

The FCC's choice not to identify ported-out numbers separately for utilization reporting purposes made eminent sense in 2000. In the intervening years, however, the competitive landscape has changed, most notably in the marked shift over time of many customers from wireline service to wireless service, and the concomitant porting of wireline numbers to the wireless service providers. The same trend can be seen in the customer shifts from traditional wireline service to Voice over Internet Protocol (VoIP) services. As a consequence of these changes, NRUF reporting is increasingly unreliable as a measure of market trends and growth in share held by various market segments. While the NRUF remains useful as a demonstration of whether any given provider holds more numbers than the rules allow, it is becoming less and less indicative of actual

⁴ *In the Matter of Numbering Resource Optimization, Report and Order and Further Notice of Proposed Rulemaking*, FCC 00-104, CC Docket No. 99-200, Released March 31, 2000, ¶ 18.

subscriberhip, and thus is not an accurate representation of the numbering resources landscape. As time goes by and more customers port from one provider to another, the numbers simply do not reflect actual usage patterns.

II. DISCUSSION

The CPUC has found that access to NRUF data has been an invaluable tool in managing numbering resources within the state of California. NRUF data can be downloaded to excel files via password protected access to the web-based numbering administration system. The Communications Division reviews NRUF data every six months, shortly after each reporting period has closed and the data is available. Through this review, staff in the CPUC's Communications Division (CD) are able to identify excess numbering resources held in carrier inventories, and service providers are routinely contacted and asked to return unused numbering resources to the number pool. The CD staff also report to the CPUC on the results of this review, and in that context, CD comments on trends identified through the numbering resource assignment data and notes market shares of service providers and their affiliates.

As noted above, in its first *Report and Order* in the Number Resources Optimization (NRO) docket, the FCC declined to treat ported numbers as a category separate from assigned numbers. Ported-out numbers are included in the donating service provider's assigned number count to the extent that an end user is using each of those numbers.⁵ Therefore – and this is key – a service providers' reported assigned numbers include numbers in use by its own customers *and* numbers being used by other

⁵ Presumably, a ported-out number that is no longer being used by a customer would be treated as an aging or unassigned number.

service providers' customers. Put another way, a reporting carrier's assigned number count is not equal to the number of subscribers that the service provider is serving within a specific rate center, an area code, or even within a state. The assigned number count reflects only the numbers the service provider obtained from the NANPA and which are assigned to an end user, whether or not the end user is a customer of the reporting service provider.

The rate at which end users port numbers away from a service provider and/or port-in to another service provider varies. Sometimes, in a given year, more customers port away from a carrier than port in; other years, the reverse is true. For purposes of these comments, we refer to the difference between the port-outs and the port-ins compared to the total number of subscribers as the diversion rate. A positive diversion rate means more customers ported-in than ported-out, while a negative diversion rate is more port-outs than port-ins. Assuming a consistent diversion rate of negative 1% – the excess of port-outs over port-ins – a service provider reporting 1000 assigned numbers in its NRUF in a given rate center would have only 851 subscribers after fifteen years of porting because each year a certain number of customers would port out. The number of port-outs – in this example – would exceed the number of customers who port in by 1% of the carrier's customer base. Below is a table of the variance between assigned numbers and subscribers over time, assuming a constant negative diversion rate of 1%.⁶

⁶ In reality the diversion ratio would unlikely be constant. Rather, the rate may be positive or it may be negative and the percentage would vary with each period.

	Assigned Numbers	Diversion Ratio	Net Port Outs	Number of Subscribers	Difference Between Assigned Numbers and Subscribers
1998	1000	0.01	10	990	10
1999	1000	0.01	10	980	20
2000	1000	0.01	10	970	30
2001	1000	0.01	10	961	39
2002	1000	0.01	10	951	49
2003	1000	0.01	10	941	59
2004	1000	0.01	9	932	68
2005	1000	0.01	9	923	77
2006	1000	0.01	9	914	86
2007	1000	0.01	9	904	96
2008	1000	0.01	9	895	105
2009	1000	0.01	9	886	114
2010	1000	0.01	9	878	122
2011	1000	0.01	9	869	131

As this analysis shows, the cumulative effect of carriers' not reporting ported numbers renders the assigned number reports less and less meaningful over time. So in 2011, fourteen years after implementation of LNP, this example shows that the service provider's subscriber level is 87% of the carrier's assigned number count.

In the first *NRO Report and Order*, the FCC authorized on-going state access to assigned number data, by prefix and by 1000s-block explaining its reasoning as follows:

We find that the states have legitimate reasons for obtaining disaggregated, carrier-specific data. The states are responsible for NPA relief decisions and other delegated numbering issues. Such decisions must be based on specific utilization data.⁷

⁷ *NRO Report and Order*, ¶ 75.

Because the NRUF does not contain a category for ported numbers, the states, which otherwise have access to state-specific NRUF data for all carriers, do not have access to information about any service provider's ported-out or ported-in numbers. The inability of states to view port-out and port-in data as easily as they can review NRUF data means that California does not have an accurate read of carrier number inventories, or of the effect of market shifts on number use. Yet, in granting the states access to numbering resource data, the FCC said, "[w]e find that the value to state commissions of access to these data outweighs the confidentiality concerns expressed by carriers required to submit forecast and utilization data to the NANPA."⁸ The same should hold true for state access to number porting data.

The CPUC is mindful of carrier concerns that state access to porting data poses the potential for the data to be compromised. However, since the FCC granted state access to NRUF data, no state has released any of the data to the public or to competitors, nor is the CPUC aware of any other instance in which a carrier has raised identified a breach of the confidential nature of this data.

The CPUC recognizes and agrees with the FCC's concerns set forth in the first *NRO Report and Order* about the imperative to avoiding double counting of telephone numbers. Nonetheless, California is compelled to point out that current ambiguities in the existing number reporting system⁹ make the NRUF reports less than absolute.

⁸ *Id.*, ¶ 81.

⁹ The definition of intermediate numbers is subject to wide interpretation among the service providers and service providers receiving numbers are not necessarily obligated to report the status of those numbers.

California is concerned that failure to categorize or report on ported numbers is having a greater effect on the veracity of the number utilization reports than the current ambiguity in reporting intermediate numbers. Further, the lack of data on ported numbers likely will become more and more significant as time goes by. The widening gap between assigned numbers and subscribership makes NRUF data less and less useful for evaluating industry trends and determining competitiveness – or lack of competitiveness – in the communications industry. These are valid exercises of delegated authority from the FCC for purposes of area code planning and relief for any state and are particularly important in California, which comprises a disproportionately large share of communications services customers.¹⁰

The FCC has acknowledged the importance of such monitoring. In the *NRO Report and Order*, the FCC noted that the number reporting system in use at that time (referring to the Central Office Code Utilization Survey, or COCUS, the predecessor to NRUF) had a number of limitations, one of which was that it lacked sufficient specificity to facilitate a determination of how carriers are using numbers.¹¹ California believes that it is important not only to determine definitively how carriers/service providers are using numbers but which types of service providers are using how many numbers.

California urges the FCC to adopt a requirement that carriers report ported-in numbers and ported-out numbers as they report assigned numbers – as a separate

¹⁰ An extrapolation of the FCC's Numbering Resource Utilization in the United States, NRUF data as of June 30, 2009, shows that, as of that date, California had 82,747M or 12% of the 673,204M total assigned numbers in the United States and its territories. The next largest count of assigned numbers was Texas with 50,850M, or 8%.

¹¹ *NRO Report and Order*, ¶ 38.

category – by service provider, by rate center, by central office code, and by numbering block. California also proposes that the ported-out and ported-in number counts be accessible to the states on the same basis as assigned numbers are today.

III. CONCLUSION

The CPUC has found assigned number data for California to be extraordinarily useful in its efforts to encourage number conservation and to monitor industry trends. The CPUC would consider similarly accessible data on ported numbers to be another extraordinarily valuable tool for monitoring actual number use and number use trends, given that assigned number data is becoming less and less reflective of the actual market as time passes. We urge the creation of an accessible data base of ported numbers to be added to the existing number assignment categories in the development of a next-generation Number Portability Administration Center/Service Management System.

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Respectfully submitted,

HELEN M. MICKIEWICZ

By: HELEN M. MICKIEWICZ

505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-1319
Attorneys for the Public Utilities Commission
of the State of California