



WILTSHIRE
& GRANNIS LLP

1200 18TH STREET, NW
WASHINGTON, DC 20036

TEL 202.730.1300 FAX 202.730.1301
WWW. WILTSHIREGRANNIS.COM

ATTORNEYS AT LAW

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Marlene H. Dortch
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: *Numbering Policies for Modern Communications*, WC Docket No. 13-97, *IP-Enabled Services*, WC Docket No. 04-36, *Telephone Number Requirements for IP-Enabled Services Providers*, WC Docket No. 07-243, *Telephone Number Portability*, CC Docket No. 95-116, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, *Connect America Fund*, WC Docket No. 10-90, *Numbering Resource Optimization*, CC Docket No. 99-200, *Petition of Vonage Holdings Corp. for Limited Waiver of Section 52.15(g)(2)(i) of the Commission's Rules Regarding Access to Numbering Resources*, *Petition of TeleCommunication Systems, Inc. and HBF Group, Inc. for Waiver of Part 52 of the Commission's Rules*

Dear Ms. Dortch:

This April, the Commission adopted a carefully targeted trial of direct access to numbering resources. This trial was designed to test claims made by Vonage and others about the benefits and, some claimed, risks of direct access. That trial has been a resounding success.

By this filing, Vonage delivers its final report on the trial.¹ To assist the Commission in its ongoing rulemaking, Vonage reports on its successes and lessons learned. Specifically, in Part 1 of this final report, Vonage explains how direct access advanced key Commission policy goals, including IP interconnection. Next, in Part 2, Vonage shares technical lessons learned in the course of the trial. Finally, in Part 3, Vonage reports the categories of information required by the Commission in connection with the trial.

¹ Pursuant to Paragraph 101 of the *Notice of Proposed Rulemaking, Order, and Notice of Inquiry* issued in the above captioned proceedings on April 18, 2013 (“*Numbering Order*”), Vonage’s initial report was due sixty (60) days after Vonage requested direct access to numbers. After the initial report, ongoing reports were due monthly during the course of the trial. Vonage filed its initial report on the trial on August 19, 2013, its second report on September 19, 2013, its third report on October 24, 2013, and its fourth report on November 19, 2013.

The Commission's successful trial demonstrates, once and for all, that direct access to numbers will drive IP interconnection, improve service quality, and lower costs without harming the public good. The Commission should build on the success of the trial by immediately adopting rules granting interconnected VoIP providers direct access to numbers.

1. The Trial Demonstrates that Direct Access to Numbers Serves the Public Interest.

First and foremost, the trial confirmed what Vonage has long explained: direct access to numbers furthers the public interest without harming call routing, number porting, or intercarrier compensation. During the trial Vonage concluded an IP interconnection agreement with Verizon, one of the largest carriers in the nation, which will allow both Verizon and Vonage customers to enjoy the quality of service and cost benefits that come from the IP exchange of traffic.² Other providers have entered into or are negotiating IP interconnection agreements with Vonage that promise similar benefits. Even this narrow trial, in other words, facilitated IP interconnection agreements. The Commission should move swiftly to expand direct access to help facilitate the move to IP interconnection and the consumer benefits including lower cost and higher quality service that will result from this change.

Equally important, the trial proved that that routing, porting, and intercarrier compensation are not impaired by direct access. During the trial, Vonage calls routed successfully, as normal; Vonage ported numbers in and out successfully, as normal; and direct access did not impact terminating intercarrier compensation for calls originated from these numbers. In addition, Vonage and its carrier partners set up routing arrangements to seamlessly deliver calls to numbers directly assigned to Vonage. Indeed, Vonage now appears in the LERG and NPAC industry databases in the Internet Protocol Enabled Services ("IPES") category; this is how the industry will see any VoIP provider with numbers. Further, using its years of experience under the existing porting rules, Vonage enabled seamless port in and out of directly held numbers. Finally, Vonage is not aware of any intercarrier compensation disputes that have arisen in connection with its directly assigned numbers. Other participants reported similarly successful trials.³

Vonage did face two obstacles during the trial, but each of these obstacles arose from self-interested choices by other carriers. *First*, at least one carrier was slow to enable direct

² Letter from Maggie McCready, Verizon, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 13-5 (Nov. 22, 2013).

³ See Letter from Joseph C. Cavender, Level 3, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 et al. (filed Dec. 13, 2013); Letter from Duane Dyar, Millicorp, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 et al. (filed Dec. 6, 2013); Letter from Kristin Manwarren, Counsel for Intelpeper, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 et al. (filed Nov. 26, 2013); Letter from Randall B. Lowe, Attorney for SmartEdgeNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 et al. (filed Nov. 25, 2013).

porting to Vonage.⁴ The Commission made clear in its *Numbering Order* that such porting is required: “Commission rules require carriers to port directly to interconnected VoIP providers that themselves have direct access to numbers.”⁵ Despite the Commission’s requirements, at least one carrier was slow to fulfill its obligation to port directly to Vonage.⁶ The Commission should, as proposed in the *Numbering Order*, codify its clarification of the existing requirement to port to and from interconnected VoIP providers. The Commission should make clear that it will not tolerate such anti-competitive refusals to comply with the porting rules.

Second, some carriers proposed inefficient PSTN interconnection arrangements that will likely delay the transition to IP interconnection. As discussed in this proceeding, Vonage’s plan to route PSTN traffic to directly held numbers by homing the Vonage OCN to our CLEC partner’s switch and utilize our CLEC partner’s existing trunks to the incumbent provider in the relevant market to ensure delivery of PSTN originated traffic. This arrangement is similar to how non-facilities based CLECs ensure delivery of PSTN traffic. In Atlanta and Boston, Vonage was able to implement this arrangement. AT&T and Verizon have both supported this approach and are delivering PSTN-originated traffic to the Vonage OCN over existing trunks with Vonage’s CLEC partner. Vonage understands that AT&T and Verizon modified their agreements with its CLEC partner to account for this arrangement and filed those modifications with the relevant state commissions.

Vonage, however, decided not to deploy numbers in the Phoenix area because CenturyLink demanded inefficient routing arrangements. Specifically, CenturyLink rejected the arrangement utilized by Vonage in Atlanta and Boston. Instead, CenturyLink informed Vonage that it would only exchange traffic with Vonage if Vonage purchased dedicated TDM trunks in Phoenix and directly entered into a commercial agreement with CenturyLink for the exchange of TDM traffic. While that agreement would resemble a 251/252 agreement, it is Vonage’s understanding that it would not be filed with the Arizona Corporation Commission.

While Vonage could make this arrangement work, CenturyLink’s approach is a step backwards with respect to the Commission’s goal of transitioning to all-IP networks. CenturyLink would require an unnecessary expansion of TDM facilities at considerable cost.⁷ Further, its proposed agreement would provide for CenturyLink to send traffic to Vonage for free, but require Vonage to pay intercarrier compensation for traffic it sends to CenturyLink.

⁴ Letter from Brita D. Strandberg, Counsel to Vonage Holdings Corp., to Marlene H. Dortch, Secretary, FCC, at 2 (November 19, 2013).

⁵ *Numbering Order* at par. 60; *see also id.* par. 59 (“our rules already require carriers to port numbers to VoIP providers directly, and not merely to the VoIP providers’ carrier partners”).

⁶ Vonage temporarily worked around this carrier’s failure to port by having this carrier port to a Vonage carrier partner, and then porting from the carrier partner to Vonage. Subsequent to Vonage’s Nov. 19 report, the carrier in question did enable direct porting to Vonage.

⁷ Letter from Randall B. Lowe, Attorney for SmartEdgeNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97, at 2-3 (filed Nov. 27, 2013); Letter from Randall B. Lowe, Attorney for SmartEdgeNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 (filed Dec. 16, 2013).

This arrangement would leave CenturyLink with incentives to perpetuate legacy TDM technology, contrary to the Commission's goals.

Level 3 has reported similar requirements from CenturyLink, and has explained that CenturyLink's position "cannot be reconciled with industry practice in general, or even CenturyLink's own practice."⁸ In particular, Level 3 notes that CenturyLink itself has enabled similar routing for Level 3 outside of the numbering trial.⁹ Vonage urges the Commission to use this and other proceedings to encourage carriers to adopt efficient, forward-looking interconnection and routing solutions. But the failure of some carriers to adopt efficient arrangements should not delay direct access. Vonage's experience with AT&T and Verizon demonstrates that many carriers are willing to support efficient arrangements today. This progress should not be sacrificed simply because some carriers are unwilling to adopt similar arrangements.

2. The Trial Yielded Valuable Technical Lessons.

The trial also yielded valuable information about how to enable direct access to numbers. While the trial generally demonstrated that existing rules and systems do not need modification to permit direct access, Vonage did learn important technical lessons that it shares here.

First, Vonage recommends that the Commission expressly recognize that interconnected VoIP providers may demonstrate facilities readiness by showing the combination of an agreement between the interconnected VoIP provider and its underlying carrier and an interconnection agreement between that underlying carrier and the relevant ILEC.¹⁰ Such arrangements demonstrate facilities readiness where VoIP providers have not entered into direct IP interconnection agreements with the relevant ILEC. Both AT&T and Verizon acknowledged that Vonage's arrangement with its CLEC partner satisfied this requirement and permitted porting under their interconnection agreements with that CLEC; the Commission should make this understanding express.

Second, Vonage used the trial as an opportunity to deploy the same porting tools used by traditional carriers, to the benefit of Vonage's customers and other providers. At the start of the trial, Vonage established a web interface for processing local service requests for porting numbers, allowing providers to request credentials and submit porting requests – the same

⁸ See Letter from Joseph C. Cavender, Level 3, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 et al., at 1 (filed Nov. 12, 2013) ("Level 3 Nov. 12 Ex Parte"); Letter from Joseph C. Cavender, Level 3, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 et al., at 2-3 (filed Nov. 5, 2013). See also Letter from Randall B. Lowe, Attorney for SmartEdgeNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97, at 2-3 (filed Nov. 27, 2013); Letter from Randall B. Lowe, Attorney for SmartEdgeNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 13-97 (filed Dec. 16, 2013).

⁹ Level 3 November 12 Ex Parte at 2.

¹⁰ This is the evidence that the Administrator required. The rules should explicitly reflect this method of demonstrating facilities readiness requirement for VoIP providers.

approach adopted by many traditional carriers. Vonage received requests from 30 providers and issued credentials to all of them. In addition, Vonage completed bulk ports without any problems, moving tens of thousands of numbers overnight without issue. In each case, Vonage's success shows that the industry's existing porting regime can easily accommodate direct access for interconnected VoIP providers.

Third, the trial demonstrated that no action is necessary to ensure successful routing of calls to interconnected VoIP providers that have direct access to their own numbers. Vonage worked closely with its carrier partner and the incumbent LEC to ensure the absence of routing problems. As the Commission moves forward to expand direct access to numbers, therefore, the Commission should refrain from imposing unnecessary restrictions or obligations on providers or administrators. As Neustar and iconectiv noted in their comments last summer, the numbering databases can accommodate a wide range of scenarios involving VoIP providers, whether those providers have direct access to numbers or obtain numbers through a carrier partner.¹¹ The trial confirmed that no additional regulatory action is needed to ensure that routing works from a technical perspective.

3. Final Reporting Categories Information

As of this report, Vonage provides the following information for the specific reporting categories in Paragraph 103 of the *Numbering Order*.

1. Total of new numbers placed in service:	1,702
2. Total number of port-in requests (including migration of existing customers and newly won customers):	116,948 ¹²
3. Percentage of successful port-ins:	100%
4. Total number of port-out requests for directly held numbers:	821 ¹³
5. Percentage of successful port-outs:	100%
6. Total number of routing failures:	None

¹¹ See Comments of Neustar at 16 (July 19, 2013); Comments of iconectiv at 3-4 (July 19, 2013).

¹² There are also 138 port-in requests currently pending. In addition, there have been 125 port-in requests that were rejected due to the customer providing insufficient information to meet the losing carrier's validation requirements and 240 port-in requests that were cancelled by the requesting customer prior to the port being executed.

¹³ There are also 157 port-out requests currently pending (*i.e.* Firm Order Confirmation date after 12/17/13) and 59 port-out requests that have reached their Firm Order Confirmation date but the telephone numbers have not yet been taken by the winning carrier.

7. Description of any billing or compensation disputes: None

4. Conclusion

Vonage thanks the Commission for the steps it has already taken towards direct access. The Commission has moved carefully in this proceeding, developing an extensive record and conducting a real-world trial to test direct access to numbers. That trial confirms what Vonage has long argued – direct access to numbers advances the IP transition. Further, claims by some opponents that direct access would not work have been thoroughly debunked. There were no technical problems routing PSTN traffic to directly held numbers. Porting worked smoothly and there were no intercarrier compensation issues. Armed with this data, the Commission should expeditiously adopt its proposed rule allowing VoIP providers to directly access telephone numbers.

If you have any questions, please do not hesitate to contact me at (202) 730-1346 or bstrandberg@wiltshiregrannis.com.

Sincerely,



Brita D. Strandberg
Kristine Laudadio Devine
Counsel to Vonage Holdings Corp.

cc: William Dever
Lisa Gelb
Marilyn Jones
Ann Stevens
Sanford Williams