

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

In the Matter of:

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 Telecommunications Systems,
Inc. and HBF Group, Inc. for Waiver of Part
52 of the Commission's Rules Regarding
Access to Numbering Resources

COMMENTS OF TELCORDIA TECHNOLOGIES, INC. D/B/A ICONECTIV

Telcordia Technologies, Inc.,¹ doing business as iconectiv (“Telcordia” or “iconectiv”), is pleased to submit these comments in response to the Federal Communications Commission’s

¹ Since February 14, 2013, Telcordia, a wholly owned subsidiary of Ericsson, has been doing business as iconectiv.

(“FCC”) Notice of Proposed Rulemaking (“NPRM”), Order, and Notice of Inquiry (“NOI”) in the above-referenced proceeding.² iconectiv provides market-leading solutions, including number portability clearinghouses and databases, that enable operators to interconnect networks, devices, and applications critical to evolving the global telecommunications marketplace. We welcome the opportunity to participate in these proceedings to help facilitate the transition to future all-IP networks.

DISCUSSION

iconectiv provides the Business Integrated Routing and Rating Database (“BIRRRDS”) and LERG routing guide databases for the industry. In these comments, iconectiv seeks to address the Commission’s questions in the NPRM and NOI regarding these databases.

The BIRRRDS database and the LERGTM currently provide data, including operating company numbers, NPA NXX block assignments, COMMON LANGUAGETM CLLI and Switching System Codes, and other data elements, in support of PSTN call routing for non-ported numbers. Carriers that have Administrative Operating Company Numbers (“AOCNs”) may directly or indirectly (via a third party) input their rating and routing information into BIRRRDS. In turn, the BIRRRDS database provisions the LERG, which is widely available to industry and interested entities. The LERG has served as a comprehensive, equitable, and

² *Numbering Policies for Modern Communications; IP-Enabled Services; Telephone Number Requirements for IP-Enabled Service Providers; Telephone Number Portability; Developing a Unified Inter-carrier Compensation Regime; Connect America Fund; Numbering Resource Optimization; 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 TeleCommunications Systems, Inc. and HBF Group, Inc. for Waiver of Part 52 of the Commission's Rules*, WC Docket Nos. 13-97, 04-36, 07-243, 10-90, CC Docket Nos. 95-116, 01-92, 99-200, Notice of Proposed Rulemaking, Order, and Notice of Inquiry, FCC 13-51 (rel. Apr. 18, 2013) (“VoIP Direct Access NPRM/NOI”).

standardized means of routing data exchange among service providers for thirty years. It provides a common basis for service providers to directly report their numbering and routing information, and is used by companies to support a wide range of business operations and planning needs.

iconectiv does not impose restrictions on access to the LERG, and only requires that a provider be an AOCN to input data into BIRRDS. This is true both for traditional PSTN and VoIP providers. In fact, Vonage, one of the VoIP service providers participating in the Commission's six-month VoIP numbering trials, is already established to enter data directly into BIRRDS, and iconectiv is working with other VoIP providers who have requested BIRRDS access.

The types of data in BIRRDS and, by extension, the LERG, reflect the needs of industry and the FCC's regulatory decisions. The data comes from carriers, who input it either directly or via a third party. Over the course of its existence, BIRRDS has evolved to reflect the changing industry and regulatory landscape, including data in support of equal access, CLECs, wireless, thousands-block pooling, local number portability requirements, and includes softswitch information such as call agents and trunk gateways used in routing.

BIRRDS thus evolves in line with the industry. In support, processes to identify and evaluate the need for database modifications have been developed over time. Typically, a carrier will propose modification to BIRRDS as a discussion item in an industry group or committee, such as the Common Interest Group on Rating and Routing ("CIGRR"), which is the BIRRDS User Group; the ATIS-Industry Numbering Committee ("ATIS-INC"); or ATIS-Next Generation Interconnection Interoperability Forum ("ATIS-NGIIF") groups. One of these committees then opens and analyzes the issue until it identifies a resolution, such as adding a new field or

modifying the parameters of an existing field. iconectiv, in turn, will add new fields, new field values, or edits to the database management process. In this way, BIRRDS (and the LERG) respond to business and regulatory needs and evolve along with the market.

As the need to support IP next-generation network elements has grown, iconectiv, in consultation with industry groups, has added or modified fields in BIRRDS and the LERG to allow numbering resources to be associated with softswitches and related routing arrangements for IP interconnection. iconectiv began including these additional fields and modifications in BIRRDS and the LERG over ten years ago, and further expanded data to support numbering assignments and call routing for SBC Internet Services, Inc. (“SBCIS”) after the FCC granted it direct access to numbers in 2005.³ iconectiv knows of no obstacle to using this process to evaluate and address any future issues that might arise regarding BIRRDS. The fact that certain types of data are not found in BIRRDS today reflects not a restriction from iconectiv, but rather the fact that no user has expressed a need to include that particular data. As user needs shift, the database will shift. Thus, the essential question is not what data iconectiv, the database provider, will permit in the database, but instead what data the industry or the FCC needs the database to include.

More recently, iconectiv has continued to participate actively in industry fora and to work with individual providers in identifying and assessing various scenarios related to data-exchange needs involving IP. As IP data needs become defined on a unified industry basis, BIRRDS and the LERG, which already contain both TDM and some IP-related data, will offer carriers an efficient means of exchanging data during the transition to an all-IP world.

³ *Administration of the North American Numbering Plan*, Order, FCC 05-20, 20 FCC Rcd. 2957 (2005).

The Commission has inquired about the effect of providing interconnected VoIP providers with direct access to numbers call routing or tracking.⁴ iconectiv does not anticipate any database-related call routing or tracking problems arising from allowing VoIP providers to have direct access to numbers. Call routing and tracking relies on the accuracy of the data provided by carriers to numbering databases, such as BIRRDS, the LERG, and the NPAC, not on the type of service provider involved. In other words, as long as VoIP providers, like all other carriers with access to numbering resources, ensure that their numbering and routing data is accurately input and timely updated in existing industry databases, call routing and tracking should not be a problem.

The Commission also asks whether it should require carriers to list VoIP providers in the NPAC database.⁵ VoIP providers should, consistent with carriers, be able to port numbers that they own directly. With respect to ported numbers, VoIP providers would need to be treated like any other carrier in the NPAC.

Additionally, the Commission seeks comment on how numbering schemes and databases integral to the operations of PSTN call routing will need to evolve to operate well in IP-based networks. Specifically, the Commission asks what role the existing numbering databases, BIRRDS, LERG and NPAC, should play in the transition from TDM to all-IP networks.⁶ As described,⁷ iconectiv regularly works with industry through the CIGRR and ATIS committees in a collaborative process to identify and evaluate any modifications or changes to its databases.

⁴ *VoIP Direct Access NPRM/NOI* at ¶ 44.

⁵ *VoIP Direct Access NPRM/NOI* at ¶ 45.

⁶ *VoIP Direct Access NPRM/NOI* at ¶¶ 41-46.

⁷ *See supra* at 3 (discussion of ATIS/CIGRR process); *see also* Comments of iconectiv, GN Docket No. 13-5 (filed July 8, 2013).

iconectiv believes these processes offer a time- and cost-saving way to work through the process of transitioning to all-IP networks. In addition, incorporating the existing numbering databases as an integral part of the IP transition helps maintain continuity in existing processes and systems across the industry of current and future providers. Many companies have incorporated BIRRDs or the LERG into their business practices, procedures, and processes, and will benefit from the efficiency of using these existing data sources and data flows in assessing, integrating, and developing processes and practices for their IP networks. Leveraging existing products and business processes also will aid resource-constrained carriers.

In its Notice of Inquiry, the Commission seeks comments on a broader range of numbering issues that result from the ongoing transition from fixed telephony to increased use of mobile services, from TDM to IP technologies. It also asks whether telephone numbers should remain associated with particular geographies. Specifically, the Commission seeks comment on the routing limitations that geographic numbering imposes on various industry databases (*e.g.*, BIRRDs/LEERG, NPAC, and LIDB/CNAM).⁸

The existing database structures, as the Commission is aware, reflect historical geographic regulatory requirements. As proposals for non-geographic numbering take shape, these database structures likely can be modified. Mapping numbers to IP providers may require changes to the scheme used for legacy providers, but the current CIGRR and ATIS groups can analyze and make recommendations for any modifications needed. Existing databases can also work in conjunction with ENUM databases in the IP transition. In fact, some routing options are already possible in the existing databases. BIRRDs, for example, currently has the optional capability to show a secondary OCN that could be used to indicate when a one-thousand block of

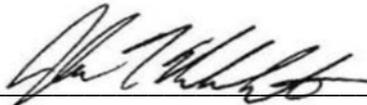
⁸ *VoIP Direct Access NPRM/NOI* at ¶¶ 128-131.

numbers is provided to an IP-enabled provider from a PSTN-based provider. And certain modifications can be readily implemented, such as including SIP endpoints. The databases function as a routing tool that can be extended to meet the evolving needs of industry and the market.

CONCLUSION

iconectiv fully supports the efforts of the Commission and industry to identify and answer questions regarding technical concerns and explore technology transition issues, and to do so in a manner that ensures the resiliency of the all-IP networks. iconectiv believes that BIRRDs and the LERG can play an important and integral role in the transition to all-IP networks, and looks forward to working with the Commission and industry in these efforts.

Respectfully submitted,



John T. Nakahata
Madeleine V. Findley
WILTSHIRE & GRANNIS LLP
1200 18th Street NW
Washington, DC 20036
(202) 730-1320

Counsel for Telcordia Technologies, Inc. d/b/a iconectiv

Dated: July 19, 2013