

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Establishing Just and Reasonable Rates for Local Exchange Carriers)	WC Docket No. 07-135
)	
High-Cost Universal Service Support)	WC Docket No. 05-337
)	
Developing a Unified Intercarrier Compensation Regime)	CC Docket No. 01-92
)	
Federal-State Joint Board on Universal Service)	CC Docket No. 96-45
)	
Lifeline and Link-Up)	WC Docket No. 03-109
)	
Universal Service Reform – Mobility Fund)	WT Docket No. 10-208

**COMMENTS
of the
NATIONAL TELECOMMUNICATIONS COOPERATIVE ASSOCIATION,
ORGANIZATION FOR THE PROMOTION AND ADVANCEMENT OF SMALL
TELEPHONE COMPANIES,
WESTERN TELECOMMUNICATIONS ALLIANCE, and the
NATIONAL EXCHANGE CARRIER ASSOCIATION, Inc.**

On

**VERIZON’S PETITION FOR LIMITED WAIVER OF THE COMMISSION’S
CALL SIGNALING RULES**

Verizon, including both Verizon Communications, Inc. and Verizon Wireless, seeks a waiver of the Commission’s newly-adopted call signaling rules with respect to (1) certain SS7 network

elements, (2) multi-frequency (“MF”) signaling equipment, and (3) originating/intermediate carrier Internet Protocol (“IP”) traffic exchanges.¹ Verizon states it requires the waiver to enable it to complete its compliance assessment, develop remediation plans, and seek further additional waivers as appropriate.²

The above-named Associations, representing rural rate-of-return regulated local exchange carriers (“RLECs”),³ do not oppose grant of a waiver to Verizon that is limited to circumstances identified in similar petitions filed by AT&T and CenturyLink, provided further that such waiver is subject to the same limitations and conditions as those the Associations recommended for AT&T and CenturyLink’s waiver requests.⁴ These limitations and conditions would include a requirement that companies who claim compliance with the new rules is impossible in certain locations without replacement of entire switches provide lists of the switch locations covered by such waivers. To the extent compliance can be achieved with reasonable effort, however, the Associations suggested grant of a waiver be for a limited period and conditioned on the company

¹ Petition for Limited Waiver of Verizon, CC Docket No. 01-92, *et al.* (filed Feb. 10, 2012) (*Petition*).

² *Id.* at 2.

³ The National Telecommunications Cooperative Association (NTCA) is a national trade association representing more than 580 rural RoR regulated telecommunications providers. The Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO) is a national trade association representing approximately 460 small ILECs serving rural areas of the United States. The Western Telecommunications Alliance (WTA) is a trade association that represents over 250 small rural telecommunications companies operating in the 24 states west of the Mississippi River. The National Exchange Carrier Association, Inc. (NECA) is responsible for preparation of interstate access tariffs and administration of related revenue pools, and collection of certain high-cost loop data. See generally, 47 C.F.R. §§ 69.600 et seq.; MTS and WATS Market Structure, CC Docket No.78-72, Phase I, Third Report and Order, 93 FCC 2d 241 (1983).

⁴ See Comments of NECA, NTCA, OPASTCO, and WTA, WC Docket No. 10-90, *et al.* (filed Feb. 9, 2012) (*Comments on AT&T’s Petition*); Comments of NECA, NTCA, OPASTCO, and WTA, WC Docket No. 10-90, *et al.* (filed Feb. 29, 2012) (*Comments on CenturyLink’s Petition*).

submitting reports at six-month intervals detailing the status of efforts to bring its network into compliance.⁵

As discussed below, some of the situations described in Verizon's petition appear similar to those faced by AT&T and CenturyLink and should therefore be treated consistently. In other cases, however, the relief requested by Verizon appears to cover network technologies that are fully capable of transmitting signaling information as required by the Commission's rules. Verizon has not provided sufficient information to warrant waiver of the rules in these instances, and its petition should accordingly be denied in those respects.

I. INTRODUCTION

In its November 18, 2011 USF and ICC Reform Order,⁶ the Commission amended its call signaling rules to require transmission of call signaling information on all traffic originating or terminating on the public switched telephone network ("PSTN"). In addition to rules requiring transmission of Calling Party Number ("CPN") data on all calls, the Commission also imposed a requirement that the Charge Number ("CN") be passed unaltered where it is different from the CPN.⁷ The Order further makes clear that the CN field may only be used to contain a calling

⁵ *Comments on AT&T's Petition* at 6; *Comments on CenturyLink's Petition* at 6.

⁶ *Connect America Fund*, WC Docket No. 10-90, *A National Broadband Plan for Our Future*, GN Docket No. 09-51, *Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 07-135, *High-Cost Universal Service Support*, WC Docket No. 05-337, *Developing an Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Lifeline and Link-Up*, WC Docket No. 03-109, *Universal Service – Mobility Fund*, WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (2011) (*Order*).

⁷ *Id.* ¶ 714.

party's charge number, and not contain or be populated with a number associated with an intermediate switch, platform, or gateway, or other number.⁸

The Commission also amended its rules to require service providers still using Multi-Frequency ("MF") signaling to pass the number of the calling party (or CN, if different) in the MF Automatic Number Identification ("ANI") field.⁹ This was intended to assure consistent treatment across signaling systems. The Commission was also concerned a categorical exclusion could create a disincentive to invest in IP technologies and invite additional opportunities for arbitrage.¹⁰

Verizon requests waiver of the new call signaling rules with respect to certain SS7 network elements, MF signaling equipment, and originating/intermediate carrier IP traffic exchanges. Specifically, Verizon first requests a waiver of the requirement to originate and pass CN (if different from CPN) for Non-Equal Access ("EA") traffic transmitted over SS7 switch equipment that must either be upgraded/modified or replaced in order to comply with the new rules.¹¹ Verizon claims grant of this waiver will afford it time to work with equipment vendors on potentially developing more cost-effective solutions than upgrading or replacing a significant number of SS7 capable switches when handling Non-EA traffic.¹²

Second, Verizon requests a waiver with regard to MF signaling, claiming it is similarly situated to AT&T and CenturyLink in this regard, and cannot pass CPN/CN in accordance with

⁸ *Id.*

⁹ *Id.* ¶ 716.

¹⁰ *Id.*

¹¹ *Petition* at 4-5.

¹² *Id.* at 5.

the new MF signaling requirement for all PSTN-bound voice traffic traversing MF trunks.¹³ Verizon explains it utilizes some MF trunking to support its operator services and directory assistance platforms, and deploys MF trunks to terminate non-EA traffic to some carriers that do not support SS7 signaling.¹⁴ Again, Verizon claims in order to comply with the new rule, it would need to wholly replace existing MF equipment.¹⁵

Finally, Verizon also requests a waiver where it operates as either a VoIP originator or intermediate IP carrier in circumstances where its systems do not send/pass CPN or CN (if different) in unaltered format because (i) this information is improperly formatted or contains unverifiable CPN or CN; (ii) the signaling equipment of the next carrier in the call flow cannot process the information; or (iii) there is a privacy restriction with the signaling information.¹⁶ Verizon claims the IP signaling standards-setting process needs to develop further before VoIP originators and intermediate carriers can be required to transmit CPN/CN signaling information in all instances.¹⁷

II. DISCUSSION

As Verizon notes, the Commission declined to adopt a general technical infeasibility exception to its revised call signaling rules.¹⁸ The Commission did indicate, however, that parties seeking *limited exceptions* or relief in connection with the call signaling rules may avail themselves of the Commission's established waiver procedures.¹⁹ While the Commission has

¹³ *Id.* at 6-7.

¹⁴ *Id.*

¹⁵ *Id.* at 7.

¹⁶ *Id.* at 7.

¹⁷ *Id.*

¹⁸ *Id.* at 4, citing *Order* ¶ 723.

¹⁹ *See id.*

stated on many previous occasions that waivers under section 1.3 of the rules “will not be granted routinely,” it has frequently cited hardship, equity, and public policy considerations as reasons for granting requested waivers.²⁰

The Associations do not object to grant of waivers of the new call signaling rules that are strictly limited in scope to a few instances involving “legacy” technology that is neither SS7 nor Internet Protocol (“IP”). Consistent with comments filed on similar waiver petitions filed recently by AT&T and CenturyLink, the Associations suggest that any waiver granted by the Commission, including any waiver granted Verizon in this instance, include requirements for the carrier to publish a list of switches covered by the waiver, to provide terminating carriers with information necessary to audit PIUs and/or call records, and submit reports to the Commission at six-month intervals detailing the status of the carrier’s efforts to upgrade its network to come into compliance with the rules.²¹

²⁰ Traditional standards for grant of Commission waivers were reviewed in *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), *cert. denied*, 409 U.S. 1027 (1972); *Northeast Cellular*, 897 F.2d at 1166. In its *USF and ICC Reform Order*, however, the Commission announced without explanation that it will apply far more stringent standards to petitions for waiver of rules limiting high-cost support levels, despite extensive showings such rules will have unintended and unreasonable impacts on RLECs and rural consumers. *See, e.g.*, Petition for Reconsideration and Clarification of NECA, OPASTCO and WTA, WC Docket No. 10-90, *et al.*, at 19-22 (filed Dec. 29, 2011). It is critical the Commission apply uniform standards to parties seeking waivers of its rules. In the absence of a reasoned explanation for revising its standards, the Commission must continue to apply criteria previously developed under section 1.3 of its rules.

²¹ The Associations note that in its reply comments on its own waiver petition AT&T claims such conditions are unnecessary and costly. *See* Reply Comments of AT&T, Inc., WC Docket No. 10-90, *et al.*, at 6 (filed Feb. 24, 2012). However, each carrier requesting a waiver has indicated it has identified where the limited, specified waiver is supposedly required, and therefore have apparently already identified the switches that are not capable of meeting the new rules. Thus, preparing a list of already identified switches should not be terribly burdensome. Moreover, the idea that a waiver proponent seeking special permission to send what would otherwise clearly be phantom traffic should bear no burden to ensure that the limits of that permission are well-defined and narrowly confined is highly problematic. It begs the question of what else might “leak through” if the waiver is granted. If the Commission is committed to solving the phantom traffic problem, it will: (a) make sure its rules govern; and (b) make sure

Verizon does not explain in its waiver request what may be required to reprogram its SS7 switches to enable them to populate both the CPN and CN fields, when the CN is different than the CPN, in order to comply with the Commission’s call signaling rules. SS7 technology clearly provides the capability to transmit both numbers. Nor does Verizon indicate how many non-EA switches are implicated, or provide any estimate as to how long work to upgrade these switches would take. This portion of the waiver request, therefore, should only be granted to the extent that Verizon provides this further information and an estimate of the time required for it to come into compliance with its SS7 switches – and only after a reasonable opportunity is afforded for interested parties to validate and comment upon the information submitted by Verizon. As the Commission is aware, a large amount of toll phantom traffic arrives over trunk groups designated for local traffic, and without proper call signaling information carriers are unable to properly bill such calls.

Verizon’s second request is for PSTN-bound voice traffic traversing MF trunks. Verizon claims for non-EA traffic exchanges, the MF equipment deployed in Verizon’s network was not designed to signal CPN or CN as contemplated by the Commission’s new rules, and claims the “industry standard for MF signaling simply does not provide these specifications for the ANI field; and therefore, it is not technically feasible to populate the ANI field in this manner.”²² Verizon explains, like AT&T, it utilizes some MF trunking to support its operator services and directory assistance platforms. In addition, Verizon indicates it deploys MF trunks to terminate non-EA traffic to some carriers that do not support SS7 signaling.²³

that where providers are granted a limited waiver of those rules, it is unmistakably clear to what that limited waiver applies.

²² *Petition* at 7.

²³ Verizon’s request for waiver in instances involving MF trunks differs somewhat from petitions filed by AT&T and CenturyLink. In AT&T’s case, waiver is requested for situations where MF

While the Associations are aware of the technical limitations of MF signaling technologies, the ability to send calling party information, via the ANI, over an MF trunk group is common industry practice. Because MF signaling, however, can only transmit one number – the ANI – a waiver may be required for those cases where the CN is different than the CPN. However, Verizon should be capable of sending one or the other over its MF trunks. The Associations accordingly do not oppose grant of a waiver to permit Verizon to send either the CN or CPN over such trunk groups, provided Verizon provides a list of those switch locations covered by such waiver.

Verizon also requests a waiver where it operates as either a VoIP originator or intermediate IP carrier in circumstances where the Verizon systems do not send/pass CPN and CN information because (i) this information is improperly formatted or contains unverifiable CPN or CN; (ii) the signaling equipment of the next carrier in the call flow cannot process the information;²⁴ or (iii) there is a privacy restriction with the signaling information.²⁵ With

signaling is used in its legacy interexchange network for traffic on FGD trunks and for its provision of operator services/directory assistance. AT&T at 6-8. CenturyLink requests a waiver for its use of MF signaling for when it uses MF signaling as a LEC to exchange local EAS traffic with rural LECs and CLECs, where an originating customer interconnects to a CenturyLink switch via a DTMF (Dual Tone Multifrequency) signaling trunk group, and for operator services/directory assistance (OS/DA) calls. CenturyLink at 6-8. Each petition relates, however, to specifically-identified instances involving use of MF signaling from specific switching equipment, which presumably can be identified by petitioners in periodic (e.g., quarterly) reports.

²⁴ Section 64.1601(2) requires “Intermediate providers within an interstate or intrastate call path that originates and/or terminates on the PSTN must pass unaltered to subsequent providers in the call path signaling information identifying the telephone number, or billing number, if different, of the calling party that is received with a call.”

²⁵ Verizon explains an originating customer of a VoIP call may send CPN/CN with a privacy indicator. Section 64.1601(b) provides for instances when a caller requests that the CPN not be passed on an interstate call employing SS7, and stipulates a carrier may not reveal that caller’s number or name, nor may the carrier use the number or name to allow the called party to contact the calling party.

respect to PSTN-bound VoIP traffic that Verizon originates, Verizon claims it “typically” generates and passes CPN and CN (if different) to downstream providers. However, Verizon claims there are instances where it is not possible to pass CPN or CN (if different) in an unaltered format, particularly where Verizon is the intermediate carrier, because the call detail “may be altered or ‘stripped.’” Verizon claims “the IP signaling standards-setting process is fluid and needs to develop further before VoIP originators and intermediate carriers can be required to transmit CPN/CN signaling information with PSTN traffic in all instances.”²⁶

The Associations disagree with Verizon’s claim that “it is simply not possible to fully implement the new rules before the industry settles on more specific IP signaling standards.” There are several standardized approaches to deploying VoIP/IP networks and ensuring seamless PSTN (SS7) interoperability, and the Association’s understand that none of the commonly-deployed signaling protocols prohibit transmission of calling party information, including CN and CPN data over IP networks.²⁷ Indeed, the Commission noted in the USF and ICC Reform Order that service providers may rely on calling party identifying information contained in Internet protocol sessions or messages for VoIP calls, citing to widely used IETF standards.²⁸ Verizon’s claims that no common set of standards exists today are thus not supportable. Moreover, Verizon does not identify in its petition what party, the originating or the intermediate carrier, is altering or stripping the calling party information in these cases, and thus it is difficult to ascertain Verizon’s role in the call path. It is also telling that neither AT&T nor

²⁶ *Petition* at 7.

²⁷ In fact, protocols such as SIGNaling TRANsport (“SIGTRAN”) are well suited for transporting SS7 signaling over IP-based networks. Media Gateway Control Protocol (“MGCP”) and Session Initiated Protocol (“SIP”) are widely used in the cable industry to deliver VoIP. SIP-for-Telephones (“SIP-T”) provides efficient PSTN-to-IP-to-PSTN mechanisms. For example, SIP-T encapsulates SS7 messages into IP packets without altering SS7 fields.

²⁸ *Order* ¶ 708.

CenturyLink, who together with Verizon represent the three largest U.S. carriers, have requested waivers for IP-based network elements on this basis.

Verizon also claims it is “common industry practice” for intermediate carriers to have commercial agreements with downstream providers that obligate the intermediate carrier to change or reformat the calling party information it receives from a VoIP call originator.²⁹ In situations where providers affirmatively request that a carrier change or transmit calling information in a particular format for legitimate reasons, Verizon claims a waiver will serve the public interest by allowing providers to negotiate solutions that further the exchange of desired billing and signaling information in a useful format.³⁰

While there may be legitimate reasons for such requests, these practices are also commonly used by providers to disguise the source of their traffic – exactly the behavior that has created the phantom traffic problems the Commission’s rules were intended to rectify. The Commission should not provide a waiver for such arrangements unless and until Verizon is able to identify more precisely what circumstances might justify such alterations of the signaling information and how Verizon plans to ensure downstream carriers receive the information necessary to render accurate intercarrier bills for such calls and/or audit Verizon’s PIUs.

III. CONCLUSION

The Commission must be very mindful when considering waiver petitions for its new call signaling rules that they should be strictly limited in scope to a few instances involving “legacy” technology. Thus, the Associations do not oppose that portion of Verizon’s waiver request that covers MF signaling in specific circumstances. The Commission should decline to grant waiver

²⁹ *Petition* at 9.

³⁰ *Id.*

requests involving SS7 and IP-based signaling until such time as Verizon provides more detail regarding the specific circumstances why such waivers are required and where such waivers would apply. Moreover, the Commission should require in each case that switch locations covered by such waivers be specifically identified and Verizon be required to provide terminating carriers with information necessary to audit PIUs and/or call records. In instances where waivers are based on claims that work is underway to resolve signaling problems, the Commission should require Verizon to submit reports at six-month intervals detailing the status of efforts to upgrade its network to come into compliance.

Respectfully submitted,

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March 19, 2012

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Associations' Comments was served this 19th day of March, 2012 by electronic filing and e-mail to the persons listed below.

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