

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

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

**PETITION FOR LIMITED WAIVER OF VERIZON<sup>1</sup>**

**I. INTRODUCTION AND SUMMARY.**

Verizon requests a limited waiver of the new call signaling rules adopted by the Commission as part of the *USF/ICC Transformation Order*.<sup>2</sup> A limited waiver of the rules is necessary because it is not feasible for Verizon to implement the new phantom traffic rules in certain circumstances. Grant of a waiver in this instance is consistent with the public interest<sup>3</sup>

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<sup>1</sup> The Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc., and Verizon Wireless (“Verizon”).

<sup>2</sup> See 47 C.F.R. § 64.1601(a)(1)-(2) (the “phantom traffic rules”); *Connect America Fund, et al.*, Report and Order and Further Notice of Proposed Rulemaking, WC Docket Nos. 10-90 *et al.*, FCC 11-161 (Nov. 18, 2011) (“*USF/ICC Transformation Order*”).

<sup>3</sup> 47 C.F.R. § 1.3. The Commission may grant a waiver for any part of its rules for good cause shown. In making its determination, the Commission may consider hardship, equity, or more effective implementation of overall policy on an individual basis. See *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

because it will avoid stranded investment in old technologies and allow sufficient time for industry standards to develop with respect to new technologies, which will minimize the cost of compliance for all parties and further the underlying policy goals of the phantom traffic rules. For the same reasons, Verizon has urged the Commission to reconsider the lack of any technical feasibility or industry standards exceptions to the new phantom traffic rules.<sup>4</sup> If the Commission does not reconsider the rules in a timely fashion, however, it must grant necessary waivers to carriers that need them—including Verizon.

Since the *USF/ICC Transformation Order* was issued, Verizon has taken significant steps to evaluate the feasibility of the new phantom traffic rules. Given the technical diversity of the signaling equipment currently employed in Verizon’s networks and the complexity of the myriad call flows that occur across our network platforms, our internal compliance assessment is still ongoing. However, our internal assessment has already uncovered areas where it is simply not possible for Verizon to fully implement the rule changes across certain platforms or for certain voice communications traffic. For good cause, Verizon requests a waiver of the new phantom traffic rules to enable Verizon to complete its compliance assessment, develop remediation plans, and seek further additional waivers as appropriate, and a limited waiver of the new phantom traffic rules with respect to (1) certain SS7 network elements; (2) multi-frequency (MF) signaling equipment; and (3) originating/intermediate carrier IP traffic exchanges as discussed below.

Significant new capital investments in SS7 network elements and MF signaling equipment make little sense given the transition away from these technologies in favor of IP-

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<sup>4</sup> Petition for Clarification or, in the Alternative, for Reconsideration of Verizon, WC Docket Nos. 10-90 *et al.* (Dec. 29, 2011) (“Verizon Reconsideration Petition”).

based solutions. And it will take time for all carriers to fully evaluate the capabilities of this signaling equipment and to implement new solutions even where it is possible to do so. Even after such evaluations are completed, it may turn out that implementing the new rules in some situations potentially would require deployment of expensive upgrades or complete replacement of equipment, activities that may not make sense or be in the public interest. In addition, with respect to IP signaling, Verizon has already determined that it is simply not possible to fully implement the new rules before the industry settles on more specific IP signaling standards, and any attempts to do so ahead of the standards-setting process will increase the cost of compliance and disrupt cooperative industry practices between trusted providers. Finally, requiring Verizon to strictly adhere to the new rules in these situations also makes no sense in light of the Commission's decision to adopt a bill-and-keep intercarrier compensation regime, which will moot phantom traffic concerns over time.

## **II. FULLY IMPLEMENTING THE NEW RULES IN ALL CIRCUMSTANCES IS NOT POSSIBLE AND IS INCONSISTENT WITH THE PUBLIC INTEREST.**

In the *USF/ICC Transformation Order*, the Commission adopted revisions to its call signaling rules. The new rules generally require transmission of calling party number (CPN) and charge number (CN) (if different), for voice traffic that touches the PSTN regardless of the jurisdiction or technology used to generate the call.<sup>5</sup> In addition, the rules prohibit an intermediate provider from “stripping or altering” the call signaling information provided by a preceding carrier.<sup>6</sup> The Commission acknowledged that the rules are insufficient to eliminate arbitrage; rather, they are intended to complement other reforms that will ultimately diminish

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<sup>5</sup> See *USF/ICC Transformation Order* ¶¶ 704, 710 (the new rules require that CN be passed in the signaling stream only where it is different than CPN).

<sup>6</sup> See *id.* ¶ 704.

incentives for arbitrage as the industry transitions to bill-and-keep.<sup>7</sup> The Commission attempted to balance the interest of providing terminating carriers with additional information to help them identify the jurisdiction of calls, and the burden of new rules on the industry.<sup>8</sup> The Commission considered but ultimately declined to include any exceptions to its rules out of concern that exceptions could undermine the rules.<sup>9</sup> However, in recognition of the technical limitations of existing signaling equipment and the fluid state of the industry standards-setting process for IP communications, the Commission referred carriers to the instant waiver process—which like AT&T and CenturyLink,<sup>10</sup> Verizon seeks to invoke.

**A. It is not technically feasible to transmit charge number for all SS7 capable equipment currently deployed in Verizon’s networks.**

At the time many SS7 capable switches were designed and deployed in Verizon’s networks, the applicable industry standard for non-equal access (“Non-EA”) traffic (e.g., traditional “local” traffic) did not require the use of the CN field. Consequently, many of these switches do not have the ability to generate and pass CN in this signaling field when it is different from the CPN. Based on Verizon’s current assessment, significant software upgrades

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<sup>7</sup> *See id.* ¶ 705.

<sup>8</sup> *See id.* ¶ 725. (“After considering the substantial record received in response to *the USF/ICC Transformation NPRM*, we determine that limiting the scope of the rules we adopt to address phantom traffic to CPN and CN signaling is consistent with our goal of helping to ensure complete and accurate passing of call signaling information, while minimizing disruption to industry practices or existing carrier agreements.”)

<sup>9</sup> *Id.* ¶ 723.

<sup>10</sup> *See Wireline Competition Bureau Seeks Comment on AT&T Petition for Limited Waiver of Call Signaling Rules*, CC Docket Nos. 01-92 *et al.*, Public Notice, DA 12-34 (Jan. 10, 2012); *Wireline Competition Bureau Seeks Comment on CenturyLink Petition for Limited Waiver of Call Signaling Rules*, CC Docket Nos. 01-92 *et al.*, Public Notice, DA 12-104 (Jan. 30, 2012) (together, “AT&T, CenturyLink Limited Waiver Petitions”).

and modifications would be necessary before Verizon could fully implement the new requirements for all SS7 switches. In addition, full compliance will never be feasible for a smaller subset of Verizon's SS7 capable switch equipment that is no longer supported by any vendor. In these instances, to fully implement the new rules it may be necessary to replace entire switches. Full switch replacement for the sole purpose of compliance with the new signaling rules—rules that have a short shelf life by design—presents an extreme burden and makes no sense. Verizon is still evaluating the number of affected SS7 switches with respect to Non-EA traffic and the potential cost of upgrades/modifications or replacements—but under any scenario significant, unexpected investment of capital and resources would be required, certainly running into millions of dollars. Therefore, Verizon requests a limited waiver of the requirement to originate and pass CN (if different from CPN) in accordance with the phantom traffic rules for Non-EA traffic over SS7 switch equipment that must either be upgraded/modified or replaced in order to comply with the new rules.

Grant of the limited waiver will serve the public interest by, at a minimum, affording Verizon additional time to work with equipment vendors on potentially developing more cost-effective solutions (supported by industry standards) than upgrading or replacing a significant number of SS7 capable switches when handling Non-EA traffic. The relief sought in this petition will not undermine the efficacy of the phantom traffic rules because downstream carriers will still receive CPN for all Non-EA traffic and thus be able to verify that Verizon is the originating carrier. Passing CN in these instances also would not provide any additional information to terminating carriers that could assist them in determining the jurisdiction of the traffic at issue because CN is often unrelated to the jurisdiction of any particular call. Moreover, throughout the industry carriers often have negotiated solutions in place that rely on

jurisdictional proxies or weighting of traffic volumes to higher rates when the jurisdiction of particular calls is unknown or ambiguous.<sup>11</sup>

In light of the significant financial and operational burdens to fully implement the new rules, and the relatively small benefit terminating carriers may obtain from receiving CN for all Non-EA calls at this time, grant of a limited waiver of the CN requirement is warranted.

**B. Fully implementing the new signaling rules is not technically feasible with respect to MF Signaling.**

The new phantom traffic rules require that all providers of PSTN-bound voice communications that utilize MF trunks pass CPN (or CN if different) in the automatic number identification (ANI) field.<sup>12</sup> Here, too, the Commission recommended in the *USF/ICC Transformation Order* that carriers seek waivers if their networks could not comply with new MF signaling requirements.<sup>13</sup> And the record in this proceeding contains substantial evidence of the technical limitations of MF signaling technologies, which are significantly dated.

Verizon is similarly situated to AT&T and CenturyLink<sup>14</sup> in this regard: It is not technically feasible for Verizon to pass CPN/CN in accordance with the new MF signaling requirement for all PSTN-bound voice traffic traversing MF trunks. Like AT&T, Verizon utilizes some MF trunking to support its operator services and directory assistance platforms. In addition, Verizon deploys MF trunks to terminate Non-EA traffic to some carriers that do not support SS7 signaling. For Non-EA traffic exchanges, the MF equipment deployed in Verizon's

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<sup>11</sup> See Verizon Reconsideration Petition at 10-11.

<sup>12</sup> 47 C.F.R. § 64.1601(a)(1).

<sup>13</sup> See *USF/ICC Transformation Order* ¶ 716.

<sup>14</sup> See AT&T, CenturyLink Limited Waiver Petitions.

network was not designed to signal CPN or CN as contemplated by the Commission’s new rules. 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. In order to comply with the new rule, Verizon would need to wholly replace this existing MF equipment. But even replacement of this equipment (potentially with SS7 capable facilities) would only be a viable option if the *terminating* carrier also agrees to upgrade its facilities to support SS7 signaling. And—while Verizon is still evaluating the potential scope and cost of such replacements—for the reasons discussed above any replacement of MF facilities would certainly impose a significant economic burden and divert resources away from broadband deployment. Moreover (also as discussed above) upgrades to old technology will not provide terminating carriers with additional useful information to help them jurisdictionalize their traffic. Accordingly, it would not further the public policy goals of the rules to require Verizon to replace MF equipment under these circumstances.

**C. Ubiquitous adherence to the new phantom traffic rules for VoIP traffic that connects with the PSTN is premature and will cause significant disruption to the industry.**

The new rules generally apply to VoIP traffic exchanged with the PSTN. But, as the Commission correctly noted with respect to IP traffic, these “standards and practices are rapidly changing. . .we refrain from mandating a specific compliance method and instead leave to service providers using different IP technologies the flexibility to determine how best to comply with this requirement.” *USF/ICC Transformation Order* ¶ 717. Verizon agrees that 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.

Verizon currently provides a variety of VoIP services to residential customers, businesses, and other VoIP providers and wholesalers. With respect to PSTN-bound VoIP traffic that Verizon originates, Verizon typically generates and passes CPN and CN (if different) signaling information to downstream providers. However, as Verizon and others have previously informed the Commission, there are instances where it is not possible for Verizon, particularly when acting as the intermediate carrier of certain VoIP traffic that connects with the PSTN, to pass CPN or CN (if different) in an unaltered format.<sup>15</sup> For instance, the lack of standardized signaling for IP traffic prevents CPN/CN information from being passed when the IP information sent is materially defective or passed to an intermediate carrier in a format that cannot be processed by that carrier's equipment. Until there are reliable and widely adopted standards for passing such signaling information in IP, there will be circumstances where a provider's equipment is not technically capable of processing and passing the information to downstream providers. The call detail in these cases technically may be altered or "stripped" because, in the absence of industry standards for IP signaling, it is simply not feasible for the intermediate carrier to handle this information any other way. Compliance in advance of standards will not further the reliability of the exchange of information among carriers with VoIP calls that connect with the PSTN. Moreover, immediate compliance with the phantom traffic rules in these instances will increase costs (with no corresponding benefit) by forcing providers to develop nonstandard solutions that may need to be retrofitted or replaced when the industry does arrive at more specific, widely adopted IP signaling standards. Industry standards-setting

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<sup>15</sup> See, e.g., Verizon and Verizon Wireless Reply Comments at 31-32 (April 18, 2011); see also PAETEC Comments at 8, Earthlink Comments at 22; Comcast Comments at 10; Sprint Comments at 26; AT&T Comments at 22; Alliance for Telecommunication Industry Solutions (ATIS) Comments at 4.

bodies such as ATIS are actively working on new IP signaling issues, but this process is not finished.

There are also a few situations (supported by common industry practice), where carriers in a VoIP call flow do not—and should not—pass signaling information downstream for legitimate reasons. For example, an originating customer of a VoIP call may send CPN/CN with a privacy indicator. If the intermediate provider is transmitting a private call to a non-trusted third-party or end point (for legitimate public safety or other reasons), the carrier may not pass the signaling information to maintain the privacy of the call. It is also 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. The primary reason for altering call identifying information in these instances is to, again, accommodate the many non-standard protocols and formats that are being utilized by different VoIP providers.

In these situations where providers affirmatively request that a carrier change or transmit calling information in a particular format for legitimate reasons (*e.g.*, public safety or the lack of IP signaling standards), 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. This level of cooperation among providers in the VoIP call stream minimizes the proliferation of ambiguous call identification information and helps streamline the exchange.

As with traditional circuit-switched calls, the evolution and development of industry standards will ultimately resolve these IP signaling issues by providing guidelines that direct all carriers, VoIP providers, and equipment manufacturers as to how to ensure that relevant data is exchanged while still protecting the privacy preferences of end-users. But strict compliance with

the new rules at this time will result in passing of unverified and/or improperly formatted CPN or CN for VoIP traffic that is not useful to terminating carriers in identifying the jurisdiction of these calls for intercarrier compensation purposes.

For these reasons, Verizon requests a limited waiver of the rules where it operates as either a VoIP originator or intermediate IP carrier in circumstances where the Verizon systems do not send/pass IP signaling 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; or (iii) there is a privacy restriction with the signaling information.

### **III. CONCLUSION.**

The Commission should grant Verizon's request for a waiver of the phantom traffic rules to enable Verizon to complete its compliance assessment, develop remediation plans, and seek further additional waivers as appropriate, and a limited waiver of the new phantom traffic rules with respect to (1) certain SS7 network elements; (2) multi-frequency (MF) signaling equipment; and (3) originating/intermediate carrier IP traffic exchanges as discussed herein.

Respectfully submitted,

By: /s/ Christopher M. Miller

Michael E. Glover, *Of Counsel*

Christopher M. Miller  
Elaine Critides  
1320 North Courthouse Road  
9<sup>th</sup> Floor  
Arlington, VA 22201-2909  
(703) 351-3071

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*Attorneys for Verizon  
and Verizon Wireless*