

**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
	)	
Verizon Petition for Limited Waiver of Call Signaling Rules	)	

**REPLY COMMENTS OF VERIZON<sup>1</sup> IN SUPPORT OF LIMITED WAIVER**

In response to the Commission’s new phantom traffic rules,<sup>2</sup> Verizon sought clarification or reconsideration to incorporate exceptions for situations in which it would be technically infeasible or inconsistent with industry standards for carriers to provide the signaling information now required by those rules.<sup>3</sup> In the alternative, Verizon and other carriers requested a limited waiver covering certain specific situations where implementing the new call signaling rules is

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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”).

<sup>3</sup> See Petition for Clarification or, in the Alternative, for Reconsideration of Verizon, WC Docket Nos. 10-90 *et al.* (Dec. 29, 2011) (“Verizon Reconsideration Petition”).

simply not possible.<sup>4</sup> In the absence of reconsideration, the Commission – as it committed to doing – should grant waivers to carriers such as Verizon that legitimately need relief.

Verizon understands the Commission’s concern that overbroad exceptions could undermine its new signaling rules.<sup>5</sup> Nevertheless, undisputed record evidence shows that there are limited situations in which flexibility is necessary to accommodate legacy technology or other practical concerns, for Verizon and other carriers. No commenter, even among those who oppose Verizon’s request, suggests that legitimate concerns do not exist: opposing commenters focus on the *breadth* of an appropriate accommodation, not the *need* for one.<sup>6</sup>

Verizon has provided considerable detail about the specific situations that have prompted it to seek relief: (1) SS7 network elements that would need to be upgraded or replaced in order to comply with the Commission’s new rules as written;<sup>7</sup> (2) multi-frequency (MF) signaling equipment that was not designed to signal the calling party number (CPN) or charge number (CN) as contemplated by the Commission’s new rules and would need to be replaced;<sup>8</sup> and (3) three specific situations involving VoIP traffic in which it is impractical – or, based on legitimate privacy and public safety concerns, undesirable – for Verizon to pass CPN or CN on to the

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<sup>4</sup> See Petition for Limited Waiver of Verizon, WC Docket Nos. 10-90 et al. (Feb. 10, 2012) (“Verizon Waiver Petition”).

<sup>5</sup> See Verizon Reconsideration Petition at 10; Verizon Waiver Petition at 4.

<sup>6</sup> See AT&T Comments at 1-2 (Feb. 29, 2012) (supporting Verizon’s petitions); CenturyLink Comments at 1-3 (same); NTCA *et al.* Comments (supporting Verizon’s petition for waiver in part, while advocating conditions); Frontier Comments at 6 (although opposing Verizon’s petition for waiver, stating that Frontier “acknowledges the technical limitations of . . . MF signaling”); Windstream Comments at 5 (stating that “Windstream does not oppose Verizon’s waiver request to the extent it seeks th[e] same relief” sought by AT&T and CenturyLink).

<sup>7</sup> See Verizon Waiver Petition at 4-6.

<sup>8</sup> See *id.* at 6-7.

terminating carrier.<sup>9</sup> Verizon is also providing additional information in these Reply Comments. The Commission should grant Verizon's request for waiver.

### DISCUSSION

1. ***Certain Legacy SS7-Capable Equipment.*** Verizon explained in its Waiver Petition that some of its SS7-capable switches were designed to handle non-Equal-Access (“non-EA”) traffic at a time when industry standards for such traffic did not require the use of the CN field.<sup>10</sup> Since that time, Verizon has worked to quantify the issues. Verizon is now able to clarify that the limited waiver it seeks would cover less than half of its SS7-capable non-EA trunk groups.

More specifically, Verizon estimates<sup>11</sup> that roughly 40 percent of its SS7-capable non-Equal-Access trunk groups are presently unable to pass on CN when it is different from CPN.<sup>12</sup> All but a handful of those trunk groups are associated with switches that *theoretically* could be modified on a trunk-group by trunk-group basis over a period of time. But that process would include checking the trunk groups that need to be modified, setting up and performing the modification itself, and performing a check after the fact to ensure that the modification has occurred successfully. Verizon has not yet fully tested the contemplated modification procedure,

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<sup>9</sup> *See id.* at 7-10.

<sup>10</sup> *See id.* at 4-6.

<sup>11</sup> Note that all data provided herein reflects good faith, but preliminary estimates. Verizon is responding with this level of specificity to address commenters' concerns, but these estimates could change upon more detailed analysis. However, the accusation from some commenters – *see* Windstream Comments at 3-4; Frontier Comments at 4 – that Verizon is simply trying to avoid implementing the phantom traffic rules or failing to commit sufficient resources is without merit. Verizon has already spent hundreds of hours (or more) on this project since the November 2011 release of the phantom traffic rules revision, investing significant engineering, network analysis, and other resources. That process will continue.

<sup>12</sup> *See Connect America Fund, et al., Report and Order and Further Notice of Proposed Rulemaking*, 26 FCC Rcd 17663, ¶¶ 704, 710 (2011) (“*USF-ICC Transformation Order*”).

and tests may reveal additional difficulties or delays. Nonetheless, current (yet preliminary) estimates indicate that approximately 98,000 trunk group translations would need to be modified, which would require approximately 50,000 hours of work (about one-half hour per trunk group). Even with a large, dedicated team working full-time, modifying these trunk groups would take a significant amount of time (potentially months or years depending on the size of the team) and would cost several million dollars. Verizon is continuing to work internally and with its vendors to determine whether there are more efficient ways to modify trunk groups.

Included in the 40 percent estimate also are trunk groups associated with 10 switches that would need to be replaced entirely, rather than merely modified, in order to pass CN if different from CPN. Of these, Verizon is planning to replace two switches by the end of 2012 as part of its regular network maintenance, and to use replacement switches that are prospectively capable passing CPN and CN, if different. The remaining eight of these 10 switches are not currently scheduled for replacement. Verizon estimates the incremental cost of replacing those additional eight switches would be (roughly) up to \$24 million.

In light of the Commission's prospective decision in the *USF-ICC Transformation Order* to transition to bill-and-keep, the substantial cost, time, and energy required either to modify existing switches or replace them would not be a justified use of resources. The Commission should grant a limited waiver of the requirement to transmit CN (where different from CPN) that would cover SS7-capable non-EA switches that would need to be modified or replaced in order to satisfy the Commission's new signaling rules. Further, even if the Commission refuses to grant such waivers indefinitely, it should at least recognize that any modifications or replacements will take substantial time, including time to coordinate with the vendors of the equipment at issue, plan the necessary changes, implement them, and test them once complete.

Commenters that oppose Verizon's request for a waiver for SS7-capable non-EA traffic do so primarily on the basis only that Verizon is seeking too broad a waiver or has failed to provide sufficient detail about the problems that it support its request.<sup>13</sup> The additional data provided in these Reply Comments should address these concerns. Verizon is seeking a waiver of the requirement to pass CN (where different from CPN) with regard to a limited set of its switches and trunk groups as to which there are genuine technical difficulties that would impose unjustified costs; or, for the same set of switches and trunk groups, with regard to the *time* needed to achieve such compliance even if the Commission concludes that the cost is justified.

2. ***MF Signaling Equipment.*** Verizon further explained in its Waiver Petition that a significant number of its MF signaling trunks are currently incapable of populating the automatic number identification (ANI) field with CPN or CN in the manner required by the Commission's new traffic-signaling rules.<sup>14</sup> Verizon has worked to quantify this problem, as well.

Verizon's current estimate is that it has approximately 1,300 MF signaling trunk groups as to which it cannot satisfy the Commission's new rules for passing CPN or CN in the ANI field. There does not appear to be any substantial dispute that MF signaling poses a problem that justifies at least some waiver of the Commission's traffic-signaling rules.<sup>15</sup> Some commenters argue for a narrower waiver than Verizon has suggested – for example, NTCA suggests that the MF signaling portion of Verizon's network “should be capable of passing one or the other” (that

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<sup>13</sup> See NTCA *et al.* Comments at 7; Frontier Comments at 3-4; Windstream Comments at 2.

<sup>14</sup> See Verizon Waiver Petition at 6-7.

<sup>15</sup> See NTCA *et al.* Comments at 8 (“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.”); Frontier Comments at 6 (“Frontier acknowledges the technical limitations of . . . MF signaling but is concerned that Verizon does not identify the amount of its traffic that uses MF signaling.”); Windstream Comments at 5 (“Windstream does not oppose Verizon's waiver request to the extent it seeks th[e] same relief [as AT&T and CenturyLink.]”).

is, CN or CPN).<sup>16</sup> This type of generalized assertion about what legacy technologies “should be” able to do, made by commenters unfamiliar with Verizon’s particular network configuration, should carry little weight. The fact is, as Verizon has explained, that MF signaling is old technology that will be phased out naturally. It makes no sense to require carriers using these facilities for some amount of legacy traffic to incur substantial expenses merely to comply with new signaling rules that have a short shelf life by design.

3. ***Limited VoIP Situations.*** Verizon has also requested a limited waiver of the phantom traffic rules with regard to several discrete situations that occur when Verizon acts as a VoIP originator or intermediate IP carrier. The first situation occurs when Verizon, acting as an intermediate carrier, receives from an upstream carrier information that is improperly formatted or contains unverifiable CPN or CN. Although some commenters dispute the extent to which the industry has already converged on standards that should minimize this problem,<sup>17</sup> none of them dispute that Verizon may receive improperly formatted or unverifiable information at least some of the time. And none of them suggest any way in which passing on such defective information unaltered – creating a “garbage in, garbage out” situation – would actually help a downstream carrier in any way. Verizon’s systems are not currently set up to pass on defective information, and because there is nothing in the record to suggest that the costs of the modifications needed to

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<sup>16</sup> See NTCA *et al.* Comments at 8; *see also* Windstream Comments at 5 (arguing that any waiver should “not extend to . . . the obligation to pass the calling party number”).

<sup>17</sup> See NTCA *et al.* Comments at 9-10 (arguing that there are “several standardized approaches to deploying VoIP/IP networks and ensuring seamless PSTN (SS7) interoperability”). But of course NTCA’s argument that there are “several standardized approaches,” *id.*, is not at all inconsistent with Verizon’s position that there are still many “non-standard protocols and formats that are being utilized by different VoIP providers” and that the “process” of standardizing “is not finished.” Verizon Waiver Petition at 9. In any event, if NTCA is correct that widely adopted standards already exist (although Verizon disagrees), problems related to incompatible formatting should be few and far between.

do so would be offset by any benefit to any other carrier (indeed, there is no benefit), it would be unreasonable for the Commission to require Verizon to incur those costs.

The second situation occurs when Verizon, acting as either an originating or intermediate carrier, passes traffic to a downstream carrier with signaling equipment that cannot process the information in the formatting that Verizon provides. Accordingly, even though Verizon may have the information and be willing to pass it on, it may not be able to do so in a way that the downstream carrier can accept. Again, although some commenters oppose a waiver on these grounds,<sup>18</sup> it is unclear what they think Verizon should do. The phantom traffic rules certainly do not suggest that IP-based carriers are or should be *prohibited* from connecting with other IP-based carriers that may use different equipment or different formatting. Nor do they give a carrier in Verizon's position any way of *compelling* other carriers to adopt compatible equipment or formatting. Until the industry converges on a single standard or set of standards that are fully mutually compatible, there will be some situations in which CN/CPN information cannot as a technical matter be passed on unaltered.

The third situation occurs when Verizon, acting as an originating carrier, receives call origination information that is subject to a privacy indicator from the originating end user. The *USF-ICC Transformation Order* did not amend 47 C.F.R. § 64.1601(b), which requires carriers to comply with a privacy indicator placed on an interstate call, nor did anything in that order suggest that the new phantom traffic rules were intended to override § 64.1601(b). Verizon's best understanding of its obligations under the Commission's rules is that it *cannot* pass CPN information that is subject to a privacy indicator to a non-trusted third party. In some circumstances compliance with this obligation may require Verizon to strip or alter the

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<sup>18</sup> See Windstream Comments at 3-4.

information to ensure that it is not passed on. The Commission should make clear, through waiver or otherwise, that stripping or altering CPN or CN information to comply with an end-user's privacy indicator is not a violation of the phantom traffic rules.<sup>19</sup>

Respectfully submitted,

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<sup>19</sup> The only commenter to address the problem posed by a privacy indicator is Windstream, which states that it could “potentially” support a waiver for this reason “provided that the originating carrier establishes an alternative method by which terminating carriers can receive accurate billing information,” but that it “cannot at this time support such a waiver” because “Verizon has not yet demonstrated such an alternative method.” Windstream Comments at 4 n.7. This appears to suggest that Verizon should, in the meantime, override privacy indicators placed by end users when necessary to comply with the phantom traffic rules. Verizon respectfully suggests that the better default rule is to *honor* privacy indicators until a better solution is found.