

February 28, 2023

***Ex Parte* Notice**

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
45 L Street, N.E.
Washington, D.C., 20554

RE: Call Authentication Trust Anchor, WC Docket No. 17-97

Dear Ms. Dortch:

On Friday, February 24, 2023, the undersigned and Michael Romano on behalf of NTCA–The Rural Broadband Association (“NTCA”)¹ met with the following Federal Communications Commission (the “Commission”) staff: Elizabeth Drogula, Associate Chief of the Wireline Competition Bureau (“WCB”), Gil Strobel, Chief of the WCB’s Pricing Policy Division (“PPD”), Lynne Engledow, PPD Deputy Division Chief, Zachary Ross, Assistant Chief of the Competition Policy Division (“CPD”), Victoria Goldberg, PPD Special Counsel, and Jesse Goodwin, Connor Ferraro, and Jodie May with the CPD. The parties discussed the record compiled in response to the Notice of Inquiry² issued by the Commission seeking input on the agency’s next steps in its ongoing implementation of the TRACED Act,³ in particular, the prevalence of non-Internet Protocol (“IP”), or Time-division multiplexing (“TDM”), facilities within voice networks.

In the meeting, NTCA emphasized the need to close the non-IP gap in the STIR/SHAKEN ecosystem that results in millions of calls per day being received by consumers without authenticated caller identification. NTCA observed that the Commission has two paths available to close this gap: (1) provide those with non-IP facilities an incentive to upgrade their networks and to interconnect on reasonable terms and conditions in IP so that calls may be exchanged reliably and effectively across networks; or (2) require those with non-IP facilities to implement available authentication solutions for those networks where they choose not to migrate to IP technology and/or facilitate reasonable interconnection in IP. As NTCA emphasized, the former is the optimal path forward to achieve an IP-enabled end state.

Non-IP Voice Service Facilities Are a Considerable Gap in the STIR/SHAKEN Ecosystem.

NTCA members are committed to closing the non-IP gap in the STIR/SHAKEN authentication ecosystem. Because of this gap that persists in *other providers’* networks, many NTCA members must invest substantial sums in STIR/SHAKEN compliance only to see it not work as intended for the majority of incoming and outgoing calls. This is not only a waste of funds invested, *but far*

¹ NTCA represents approximately 850 providers of high-quality voice and broadband services in the most rural parts of the United States; historically, these have been referred to as rural local exchange carriers or “RLECs.” In addition to voice and broadband, many NTCA members provide wireless, video, and other advanced services in their communities.

² *Call Authentication Trust Anchor*, WC Docket No. 17-97, Notice of Inquiry, FCC 22-81 (rel. Oct. 28, 2022).

³ Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act, Pub. L. No. 116-105, § 4(b)(1)(B) (2019) (codified at 47 U.S.C. § 227b(b)(1)(B)) (TRACED Act).

more importantly, it leaves perhaps millions of rural consumers without access to the full benefits of caller-ID authentication. Rural consumers will continue to be victimized by spoofers and could see their calls meant for destinations outside of their rural community viewed as suspicious. While others attempt to downplay the gap,⁴ asserting that the use of call blocking tools and traceback efforts are effective and thus negate the need for widespread authentication across all networks/calls, this ignores the fact that these tools would be much improved if non-IP networks did not stand in the way of so many calls being authenticated end-to-end. This essentially asks both the Commission and potentially millions of rural subscribers to accept a lack of improved call blocking and traceback features that come with successful end-to-end authentication.

NTCA further noted that the record in this proceeding demonstrates that the continued presence of “non-IP” voice networks results in a “gap” in the STIR/SHAKEN ecosystem not only for RLECs, but for other kinds of providers as well. As the comments of the Cloud Communications Alliance,⁵ the Competitive Carriers Association,⁶ and NCTA⁷ show, the gap is not limited to NTCA members, to rural carriers, or small providers, or traditional wireline operators, but rather is far more widespread. It prevents carriers of all sizes and technologies from successfully authenticating caller-ID on an end-to-end basis.

Most importantly, for all of these parties, the non-IP gap serves as a barrier to successful authentication even when a provider has the ability to originate/terminate calls in IP – other operators’ non-IP facilities mean that authentication information is lost in transit. The substantial investments that NTCA members and the operators cited above have made in IP-enabled and STIR/SHAKEN-capable networks are defeated for perhaps millions of calls per day because of other operators’ non-IP facilities – an inarguably large “non-IP” gap in the authentication ecosystem. NTCA therefore urged the Commission to recognize that this non-IP gap cannot be closed by IP-enabled providers simply “investing more” in their networks. Pointing to “an unprecedented wave of privately funded and government-backed broadband deployment”⁸ is thus nothing more than a distraction, as it ignores that authentication is ultimately dependent in many cases upon reliably interconnected voice networks and that authentication is defeated in such cases by a single “weak link in the chain.”

The TRACED Act obligates the Commission to pursue widespread caller-ID authentication by closing the non-IP gap.

NTCA then stated that the Commission has an obligation under the TRACED Act to close the non-IP gap, as the law does not contemplate a permanent or even long-term TDM exemption. Rather, section 4(b)(5)(B) states that:

⁴ Comments of USTelecom – The Broadband Association (“USTelecom”), WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 3 (“While TDM-reliant communications may create a small gap in caller ID authentication, industry efforts and technology limitations curb the ability of illegal robocallers to exploit this gap”).

⁵ Comments of the Cloud Communications Alliance, WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 2.

⁶ Comments of the Competitive Carriers Association, WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 4.

⁷ Comments of NCTA – The Internet & Television Association, WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 2.

⁸ USTelecom, p. 10.

Subject to subparagraphs (C) through (F), for any provider or class of providers of voice service, or type of voice calls, only to the extent that such a provider or class of providers of voice service, or type of voice calls, materially relies on a non-internet protocol network for the provision of such service or calls, the Commission shall grant a delay of required compliance under subparagraph (A)(ii) ***until*** a call authentication protocol has been developed for calls delivered over non-internet protocol networks and is reasonably available.⁹

In its interpretation of this language, the Commission quoted that section and then stated that, based on the TRACED Act, “we grant [an extension] from implementation of caller ID authentication...for the parts of a voice service provider’s network that rely on technology that cannot initiate, maintain, and terminate SIP calls until a solution for such calls is reasonably available.”¹⁰ As NTCA noted at length in a separate meeting, as the record in response to the NOI indicates, two technical standards for caller-ID meet the “reasonably available” test.¹¹

This backdrop makes clear that current Commission rules requiring those materially relying on non-IP facilities to take “reasonable measures” to find a solution were intended by the Commission to apply ***until*** a solution was “reasonably available.” Now that two standards meet that test, absent amendment of the Commission rules, endless discussion of already published standards will perpetuate, not close, the non-IP gap. This is because those with non-IP facilities can comply with the rule by either (1) upgrading their networks to IP or (2) meeting for several hours every few weeks to discuss already “reasonably available” standards.

Prioritization of the IP transition via steps to facilitate greater IP traffic exchange – if done with an eye towards preserving the affordability and quality of voice service in rural areas – is the optimal path toward widespread caller-ID authentication.

The SIP Interconnection Working Group Report confirmed that Commission action is necessary to move forward in the IP transition and ensure that RLECs exchange voice traffic in IP and continue to offer affordable and quality voice service to rural consumers.

NTCA observed that, at bottom, there are two effective solutions to the non-IP gap – requiring those with non-IP facilities to implement an available solution or to choose instead to exchange voice traffic in IP subject to reasonable terms and conditions.

As background, NTCA noted that the SIP Interconnection Working Group Report¹² confirmed that the nation’s largest carriers desire an IP voice traffic exchange environment with a handful of points of interconnection (“POIs”) scattered around the nation in lieu of permitting IP interconnection at existing meet points. The report identifies several IP traffic exchange options that would impose

⁹ TRACED Act § 4(b)(5)(B) (emphasis added).

¹⁰ *Call Authentication Trust Anchor*, WC Docket No. 17-97, Second Report and Order, FCC 20-136 (rel. Oct. 1, 2020) (“*Second Caller ID Authentication Report and Order*”), ¶ 38.

¹¹ See *ex parte* letter to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 17-97 (fil. February 20, 2023), p. 4, available at <https://www.fcc.gov/ecfs/document/10221634207758/1>.

¹² SIP Interconnection Working Group Report, WC Docket No. 17-97 (fil. Nov. 16, 2022) (“*SIP Interconnection WG Report*”), available at: <https://www.fcc.gov/ecfs/document/111690901497/1>.

significant and new costs on small rural customer bases and/or have an adverse consequence on service quality.¹³ First, the “IPVS Traffic Exchange via Dedicated Connection” exchange option contemplates that IP traffic exchange would operate as “commercial agreements,” requiring each party to arrange for and pay for transport to POIs outside of current RLEC “network edges.”¹⁴ Second, “third-party” solutions identified in the report do not absolve RLECs of transport or other costs – these “third-party” authentication functions offer IP transiting (i.e., transport) service, or routing functionality that foist the increased costs of traffic exchange onto smaller providers who would be forced to procure such services because *other providers* decided not to upgrade *their* networks.¹⁵

With each of these options, the current apportionment of certain costs that exist with respect to the exchange of voice traffic would be turned on its head to the detriment of rural consumers. Under these two scenarios, RLECs would be compelled to assume the full costs of exchanging voice traffic at distant POIs – again, solely because *other providers* found it uneconomic to invest in *their* existing networks. But even worse, the “bilateral” nature of these agreements will push these costs even higher. Instead of exchanging most or all voice traffic at a single point (the tandem) with defined logistics for routing and defined financial responsibility, RLECs would be forced to arrange for and incur transport costs for taking traffic to multiple (if not dozens, perhaps) separate POIs around the nation, each set by the individual national or regional operators with whom they exchange traffic. Transactional costs and burdens for RLECs will increase as well, as negotiating agreements with multiple providers would become required and in a manner that nearly all small RLECs are not faced with today.

Even if the transport costs referenced above may be avoided, to some extent, by use of a third “IPVS Traffic Exchange Over the Internet”¹⁶ option identified in the report, this option requires routing traffic over “public Internet” best efforts connections. But, as the report acknowledges, even if service quality can in theory be cared for, this requires each provider to utilize transcoding processes to do so, and while this may be technically feasible, quality of service markers attached to voice packets in this routing scenario are not always automatically honored by both parties.¹⁷ Moreover, these transcoding measures will come with a cost as well – any use of IP facilities, even if transcoding is not used, comes with a cost. NTCA further noted that its understanding is that most operators today typically do not use public Internet routing and instead route voice traffic over dedicated or specialized and managed connections (whether TDM or IP) precisely to ensure service quality, meaning that public Internet routing would be a clear step backward in that respect.

In short, the Commission cannot breeze past the very real implications here for rural consumers of compelling RLECs to migrate to multiple new interconnections simply because upstream providers have declined to upgrade their networks for IP and thus cannot participate in STIR/SHAKEN

¹³ Comments of NTCA–The Rural Broadband Association, WC Docket No. 17-97 (fil. Dec. 12, 2022) (“NTCA”), pp. 10-13.

¹⁴ See *SIP Interconnection WG Report*, p. 3 (“Each provider is responsible for the transport facility up to the point of connection.”).

¹⁵ NTCA, pp. 9-10.

¹⁶ *SIP Interconnection WG Report*, pp. 3-5.

¹⁷ *Id.*, p. 4. (“Internet-based IP traffic exchange is a solution that relies on a “best-efforts” routing (i.e., QoS markings on packets are not honored). It does not offer the same assurances of quality as dedicated connections.”).

authentication. Absent Commission attention to the cost and service quality implications of the “options” identified in the *SIP Interconnection WG Report*, rural consumers may only obtain the benefits of STIR/SHAKEN at the expense of affordability and/or service quality.

Preservation of the status quo for relative financial responsibility for IP interconnection and traffic exchange would offer operators regulatory certainty and thus encourage the IP transition.

NTCA members are relative leaders in the IP transition. Their concern here is that the vision for IP traffic exchange found in the *SIP Interconnection WG Report* would shift costs to NTCA members from other operators that still materially rely on non-IP and with whom the former exchange traffic. From NTCA members’ perspective, the “late adopters” of IP technology supporting the options in the *SIP Interconnection WG Report* would be the primary beneficiaries here as they shed costs and reap all the efficiencies of the IP transition while foisting the costs of the transition onto other providers and the small rural customer bases they serve.

There is a simple means by which the Commission can care for this concern by avoiding significant transfer of costs while promoting IP interconnection. Specifically, adoption of a straightforward “network edge” rule – similar to previously enacted Commission provisions¹⁸ and previous NTCA proposals¹⁹ – would provide for an effective “default” apportionment of costs among operators. Pursuant to this approach, even as parties may reach mutual agreements to route calls through a variety of IP-enabled interconnection points (or to multiple points) to reach their destination, the rule would make clear that RLECs would not be financially responsible for any additional costs beyond those borne currently with respect to existing points of interconnection. This would operate as a default under which any party exchanging traffic with a RLEC would be financially responsible to interconnect with the latter in IP at the RLEC’s existing network or otherwise established interconnection point. Because this would act as a default arrangement only, the parties may mutually agree to meet and bear relative financial responsibility to interconnect via IP at a different meet point, while ensuring that RLECs would not be compelled to do so unless they find such alternative to be an efficient arrangement.²⁰

Finally, NTCA noted that the Commission could put such a rule into effect by providing operators continuing to materially rely on non-IP with a choice: (a) to upgrade their networks and interconnect on reasonable terms and conditions (such as those described above and in keeping with the default as proposed) in IP; or (b) to implement non-IP solutions where they choose not to invest

¹⁸ *Connect America Fund*, WC Docket No. 10-90, et al., Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161 (rel. Nov. 18, 2011) (“USF/ICC Transformation Order”), ¶¶ 998-999 (adopting a “rural transport rule” to ensure that the obligations of RLECs to carry originating non-access traffic do not extend beyond their service area boundaries, recognizing that absent such a rule, RLECs could be forced to incur unrecoverable transport costs); *8YY Access Charge Reform*, WC Docket No. 18-156, Report and Order, FCC 20-143 (rel. Oct. 9, 2020), ¶ 71 (reminding the industry that “on several occasions the Commission has found that unilateral attempts by a carrier to change its interconnection point with another carrier that results in increased costs or inefficient routing of traffic is unjust and unreasonable under section 201(b) of the Act.”).

¹⁹ Comments of NTCA–The Rural Broadband Association, WC Docket No. 17-97 (fil. May 15, 2020), pp. 5-10.

²⁰ Parties of all sizes and technologies wishing to exchange traffic via commercial agreements would remain able to do so as they see fit, and this would include RLECs to the extent they find a move away from the network edge to be beneficial for their customers – the RLEC simply would not be forced to do so.

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in such upgrades and provide reasonable IP-based interconnection. Even as this would operate in the first instance to further widespread end-to-end caller-ID authentication and would be adopted under the auspices of amending the Commission's rules adopted in that context, it would have broader implications for the overall IP transition by providing those with non-IP technology greater regulatory certainty in exchanging greater amounts of voice traffic in IP. Thus, such a rule would further, rather than impede, the ongoing IP transition.

Thank you for your attention to this correspondence. Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed via ECFS.

Sincerely,

/s/ Brian Ford

Brian Ford

Vice President – Federal Regulatory

NTCA-The Rural Broadband Association

cc: Elizabeth Drogula
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