

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Advanced Methods to Target and Eliminate Unlawful Robocalls)	CG Docket No. 17-59
)	
Call Authentication Trust Anchor)	WC Docket No. 17-97

**REPLY COMMENTS
OF
NTCA–THE RURAL BROADBAND ASSOCIATION**

NTCA–The Rural Broadband Association (“NTCA”)¹ hereby submits these reply comments to discuss issues raised by the Further Notice of Proposed Rulemaking (“*Further Notice*”) issued by the Federal Communications Commission (the “Commission”) in the above-captioned proceedings.² The *Further Notice* seeks comment on, among other items, whether the Commission should require all providers to adopt call authentication standards that are compatible with “non-IP” voice service networks.³ NTCA specifically discusses herein the role that “non-IP” call authentication standards could play in protecting consumers, as its small rural provider members continue to face barriers in delivering call authentication data that is generated in IP on their own networks but must then traverse other operators’ non-IP facilities. NTCA also

¹ NTCA represents approximately 850 small rural local exchange carriers (“RLECs”). All of NTCA’s members are voice and broadband service providers, and many of its members provide wireless, video, and other competitive services to their communities. NTCA is a founding board member of the Secure Telephone Identity Governance Authority (“STI-GA”) Board of Directors, and serves as well on the ATIS Non-IP Call Authentication Task Force, on the North American Numbering Council (“NANC”), and the NANC Call Authentication Trust Anchor Working Group.

² *Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No. 17-59, Call Authentication Trust Anchor, WC Docket No. 17-97, Sixth Report and Order in CG Docket No. 17-59, Fifth Report and Order in WC Docket No. 17-97, Order on Reconsideration in WC Docket No. 17-97, Order, Seventh Further Notice of Proposed Rulemaking in CG Docket No. 17-59, and Fifth Further Notice of Proposed Rulemaking in WC Docket No. 17-97, FCC 22-37 (rel. May 20, 2022) (“*Further Notice*”).

³ *Id.*, ¶ 173 (“We seek comment on whether we should require all providers to adopt a non-IP caller ID authentication solution.”).

highlights herein steps the Commission can take, in the alternative, to ensure that consumers all across the nation can realize the important consumer protection benefits that STIR/SHAKEN offers should the Commission choose not to adopt non-IP call authentication standards.

I. THE COMMISSION CAN ADDRESS THE CALL OF CONGRESS TO AUTHENTICATE ALL VOICE CALLS BY ADOPTING THE NON-IP STANDARDS NOW PRESENTED.

As background to the discussion below, most NTCA members are subject to the June 2023 STIR/SHAKEN implementation deadline applicable to “small” voice service providers as adopted by the Commission in the *Second Caller ID Authentication Report and Order*.⁴ As that compliance date approaches, even as most can generate STIR/SHAKEN call authentication information within their own IP networks,⁵ barriers to many small rural operators’ *effective* use of this standard remain. As NTCA has previously noted,⁶ the typical member company routes the vast majority of its voice traffic through upstream TDM tandem switches that are owned and operated by other carriers, meaning that any IP call authentication information generated by subtending carriers is lost. *These smaller rural operators are thus staring down an “authentication to nowhere” problem – that is, most can generate STIR/SHAKEN call authentication information on originating calls, but that information disappears at the TDM*

⁴ *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*”), ¶ 40 (adopting a June 2023 implementation deadline for “small” voice service providers, defined as those with 100,000 or fewer voice subscriber lines).

⁵ NTCA member survey data that found that more than 90 percent of the association’s members have IP switching facilities in their networks that could be used to generate call authentication data. Broadband/Internet Availability Survey Report, NTCA–The Rural Broadband Association, Dec. 2021, p. 4, available at: <https://www.ntca.org/sites/default/files/documents/2021-12/2021-broadband-survey-report-final-12-15-21.pdf>.

⁶ Comments of NTCA – The Rural Broadband Association, WC Docket No. 17-97 (fil. May 15, 2020), p. 3.

*tandem switch through which such calls are routed.*⁷ Moreover, subscribers of small rural providers will continue to receive unwanted calls/calls with “spoofed” caller-ID, as the technical ability to verify incoming calls is likewise lost over the TDM switching and network facilities in the middle of the call path.

While TDM, or “non-IP,” facilities in upstream provider networks pose a substantial barrier to full STIR/SHAKEN participation by RLECs, numerous other classes of voice service providers almost certainly confront this barrier as well. At bottom, because STIR/SHAKEN call authentication information cannot be passed on an “end-to-end” basis if TDM facilities lie *anywhere* in the call path, it will be the case that any provider that interconnects at some point through a TDM tandem faces this same kind of “break in the chain.” Indeed, the TRACED Act that mandated adoption of call authentication technology recognized this concern and therefore included provisions to exempt non-IP facilities from call authentication requirements.⁸ That exemption, however, was conditioned on providers seeking to develop (and eventually implementing) call authentication technology compatible with non-IP (or TDM) facilities.⁹ In

⁷ In the *First Caller ID Authentication Report and Order*, the Commission adopted Section 64.6301(a)(2) of its rules, which requires voice service providers to “[a]uthenticate caller identification information for all SIP calls it originates and that it will exchange with another voice service provider or intermediate provider and, *to the extent technically feasible*, transmit that call with authenticated caller identification information to the next voice service provider or intermediate provider in the call path.” 47 C.F.R. § 64.6301(a)(2) (emphasis added). *See also Call Authentication Trust Anchor*, WC Docket No. 17-97, *Implementation of TRACED Act Section 6(a) — Knowledge of Customers by Entities with Access to Numbering Resources*, WC Docket No. 20-67, Report and Order and Further Notice of Proposed Rulemaking, FCC 20-42 (rel. Mar. 31, 2020) (“*First Caller ID Authentication Report and Order*”). As the Commission found in the *First Caller ID Authentication Report and Order*, “the transmission of STIR/SHAKEN authentication information over a non-IP interconnection point is not technically feasible at this time.” *Id.*, fn. 135.

⁸ Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act, Pub. L. No. 116-105, § 4(b)(5)(B), 133 Stat. 3274, 3277 (2019) (“TRACED Act”).

⁹ *Second Caller ID Authentication Report and Order*, ¶ 68 (“The TRACED Act directs that the non-IP extension shall end once ‘a call authentication protocol has been developed for calls delivered over non-[IP] networks and is reasonably available.’”) (citing TRACED Act § 4(b)(5)(B)).

implementing this statutory directive, the Commission required operators subject to the exemption – those operators that “materially rely on non-IP” facilities – to participate in standards body efforts to develop a non-IP standard for call authentication.¹⁰ The resulting “Shaken Out-of-Band”¹¹ and “Shaken over TDM”¹² standards have emerged from the standards body process¹³ and meet the requirements set forth by the *Second Caller ID Authentication Report and Order* for a non-IP standard that is “reasonably available.”¹⁴ Adopting these standards would answer the call of Congress for call authentication across all networks.

II. IF THE COMMISSION DECLINES TO ADOPT NON-IP STANDARDS FOR SOME REASON, THE ONLY OTHER MEANS TO ENSURE CALL AUTHENTICATION AS DESIRED BY CONGRESS IS A REGULATORY FRAMEWORK TO FACILITATE IP VOICE TRAFFIC EXCHANGE.

If the Commission declines for some reason to adopt the non-IP call authentication standards presented to it, this cannot be the end of the story. Congress made clear its desire to

¹⁰ *Second Caller ID Authentication Report and Order*, ¶ 70 (“To be consistent with our approach in mandating that voice service providers take ‘reasonable measures’ to implement an effective caller ID authentication framework in the non-IP portions of their networks, we find that a voice service provider satisfies the ‘reasonable efforts’ requirement under section 4(b)(5)(D) if it is able to provide the Commission, upon request, with documented proof that it is participating, either on its own, in concert with a vendor, or through a representative, as a member of a working group, industry standards group, consortium, or trade association that is working to develop a non-IP solution, or actively testing such a solution.”).

¹¹ ATIS-1000096, Signature-based Handling of Asserted information using toKENs (SHAKEN): Out-of-Band PASSporT Transmission Involving TDM Networks (Jul. 2021), https://access.atis.org/apps/group_public/download.php/60535/ATIS-1000096.pdf.

¹² ATIS-1000095, Extending STIR/SHAKEN over TDM (June 2021), https://access.atis.org/apps/group_public/download.php/60331/ATIS-1000095.pdf.

¹³ NTCA serves as a member of the ATIS Non-IP Call Authentication Task Force. <https://www.atis.org/committees-forums/ptsc/non-ip-call-authentication-task-force/>.

¹⁴ In the *Second Caller ID Authentication Report and Order*, the Commission stated that “[w]e also find that a caller ID authentication protocol is ‘reasonably available’ if the underlying equipment and software necessary to implement such protocol is available on the commercial market.” *Id.*, ¶ 68. The Commission went on to state that, “[i]f we find after providing notice and an opportunity for comment that a non-IP solution meets these criteria, we will both modify the non-IP implementation mandate and phase out the non-IP implementation extension to account for this new solution.”) *Second Caller ID Authentication Report and Order*, ¶ 69.

have all calls authenticated ultimately, and rural consumers deserve the ability to place and receive trusted calls just like any other consumer. Thus, if the Commission decides that it will *not* adopt the standards now presented for non-IP call authentication, the Commission must do everything in its power to promote IP interconnection and the exchange of calls in IP format so that they can be authenticated via STIR/SHAKEN.

As background, it is important for the Commission to recognize that the nation’s largest service providers have made no secret that their vision of IP interconnection involves the exchange of voice traffic at a few points of interconnection (“POIs”) across the nation.¹⁵ Even as this may be technically feasible, the implications of discarding all existing interconnection arrangements and POIs on rural consumers must not be ignored or overlooked. Specifically, in the absence of any barrier to doing so, it is all but certain that larger providers will act on their long-standing pronouncements and seek to shift all POIs to distant locations and the transport costs for reaching them to these small carriers. RLECs will be forced to deliver calls to and from distant POIs that may be several states and hundreds or even thousands of miles away from the rural area where such calls originate/terminate. *This will mean that RLECs will, for the first time, be responsible for the costs of transport to and from distant POIs, costs that will, for the first time, need to be recovered entirely from small, rural customer bases.*¹⁶ While this will

¹⁵ See T-Mobile, *ex parte* letter, WC Docket No 18-156 (fil. Apr. 27, 2020) (proposing to “migrate from one POI per LATA to no more than a few dozen POIs for the entire country.”); See also AT&T, *ex parte* letter, GN Docket No. 13-5, WC Docket No. 13-97, WC Docket No. 10-90 (fil. Jan. 24, 2014) (asserting that “IP interconnection will take place on a nationwide basis, and at a relatively small number of places”); Sprint, *ex parte* letter, WC Docket Nos. 10-90, 07-135, 05-337,03-109; CC Docket Nos. 01-92, 96-45; and GN Docket No. 09-51 (fil. Oct. 3, 2011) (arguing for “the more efficient regional interconnection arrangements typically used for non-voice IP traffic”).

¹⁶ As noted above, RLECs typically route voice traffic through TDM tandem facilities owned and operated by upstream providers. In exchanging calls, RLECs typically are financially responsible to carry such traffic today to and from their “network edges” that are typically at the RLEC’s central office or some other mutually agreed upon meet point. It is NTCA’s experience that, in seeking to migrate to IP interconnection arrangements, most other providers are uninterested in retaining this relative apportionment of financial responsibility and would seek instead

undoubtedly be touted as “efficient” by the proponents of such a transition, it is critical to understand that with a shift toward a small number of POIs, any “efficiencies” of IP traffic exchange will accrue only to one segment of the industry to the detriment of another – particularly the segment of smaller providers that serve rural areas where costs are higher.¹⁷ The ability to pass call authentication information upstream will therefore come with a steep price – voice service at rates no longer affordable as transport costs are now imposed upon small rural customer bases.

Turning back to the question posed by the *Further Notice*,¹⁸ the Commission thus faces a distinct choice to fulfill congressional intent for call authentication – either adopt the non-IP call authentication standards that have been presented or ensure effective IP interconnection across networks so that STIR/SHAKEN will be more universally available. Those urging the Commission to refrain from requiring the adoption of these non-IP standards offer little, however, in terms of resolving the “TDM-in-the-call-path” barrier.¹⁹ To be sure, USTelecom hits the mark in arguing that the Commission should, if it does not adopt these standards,

to transfer the costs of transport to distant POIs to the RLEC. Such costs might be somewhat minimized via the alternative use of only “best efforts” transport of voice calls, ironically forcing RLECs to decide whether rural consumers should have affordable or quality voice service – but not both. Such a result would be hard to square with the broader public policy goals of universal service.

¹⁷ If IP interconnection truly offers the “efficiencies” claimed by other providers, it is unclear why those other providers would be unwilling to retain existing POIs and financial responsibility – presumably, the benefits of migrating to IP as compared to TDM for traffic exchange would still be a “net positive” for all involved even if all other aspects of interconnection and traffic exchange remain the same. The fact that providers are unwilling to “hold constant” the financial responsibility for interconnection and traffic exchange, whether in TDM or IP, speaks volumes as to the real extent and nature of the “efficiencies” sought in this transition by larger and regional providers.

¹⁸ *Further Notice*, ¶ 173.

¹⁹ Comments of USTelecom – The Broadband Association, CG Docket No. 17-59, WC Docket No. 17-97 (fil. Aug. 17, 2022) (“USTelecom”), pp. 17-18; Comments of NCTA – The Internet & Television Association, CG Docket No. 17-59, WC Docket No. 17-97 (fil. Aug. 17, 2022) pp. 2-3.

“continue to encourage industry to focus on deploying IP-based solutions.”²⁰ But “encouragement” is meaningless as a regulatory paradigm; the Commission was not charged by Congress to cheerlead for call authentication. Rather, the Commission must take concrete steps to ensure that all providers can successfully participate in call authentication protocols. Thus, if the Commission chooses not to adopt the non-IP standards presented, there is only one viable alternative on the record to ensure STIR/SHAKEN call authentication does not disappear at TDM tandems in rural areas – the adoption of simple “network edge” rules that clarify that rural carriers’ financial responsibilities remain as they are today under existing TDM interconnection and traffic exchange arrangements as a “default” in the absence of otherwise privately and mutually agreed upon negotiated terms and conditions. This regulatory backstop would preserve existing, well-known and well-defined constructs with respect to the apportionment of transport and other costs of interconnection and traffic exchange as part of the technology transition. In particular, RLECs would be able to enter into IP interconnection agreements without being forced to incur increased transport responsibilities in connection with other carriers’ unilateral attempts to alter existing meet points and network edges. At the same time, against this presumptive backdrop, providers of all sizes would remain free to pursue any model of IP interconnection they see fit, including the number and location of POIs, pursuant to privately negotiated commercial arrangements. Again, USTelecom is correct in noting that “there is promise in new IP traffic exchange solutions that would obviate the need for a non-IP solution in most instances.”²¹ Yet that promise must also ensure that service remains affordable in rural areas, and the network edge concept as discussed herein is key to that objective.

²⁰ US Telecom, p. 18.

²¹ *Id.*

III. CONCLUSION

It is essential that the Commission take steps to ensure call authentication is available across networks of all kinds and for the benefit of consumers in all areas of the country. Given the enduring presence of TDM tandems in many of the call flows for rural America, this can be achieved either by adopting standards for non-IP call authentication or providing a regulatory backstop against which IP interconnection – and thus IP call authentication via STIR/SHAKEN – can be promoted and implemented.

Respectfully submitted,



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