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

In the Matter of	)	
	)	
Call Authentication Trust Anchor	)	WC Docket No. 17-97

REPLY COMMENTS
OF
NTCA–THE RURAL BROADBAND ASSOCIATION

Respectfully submitted,

By: /s/ Michael R. Romano
Michael R. Romano
Executive Vice President
mromano@ntca.org

By: /s/ Brian J. Ford
Brian J. Ford
Vice President – Federal Regulatory
bford@ntca.org

4121 Wilson Boulevard
Suite 1000
Arlington, VA 22203

January 23, 2023

Table of Contents

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

In the Matter of	)	
	)	
Call Authentication Trust Anchor	)	WC Docket No. 17-97

REPLY COMMENTS
OF
NTCA–THE RURAL BROADBAND ASSOCIATION

I. INTRODUCTION & SUMMARY

NTCA–The Rural Broadband Association[1] hereby submits these reply comments addressing comments upon the Notice of Inquiry[2] ("NOI") issued by the Federal Communications Commission ("Commission") in the above-captioned proceeding. The NOI seeks input on next steps in the Commission's ongoing implementation of the TRACED Act.[3] In particular, the NOI seeks to gain additional insight on the prevalence of non-Internet Protocol ("IP"), or Time-division multiplexing ("TDM"), facilities within voice networks and how the agency can promote caller-ID authentication across all networks and for the benefit of consumers across the nation.

[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. NTCA is a founding board member of the Secure Telephone Identity Governance Authority ("STI-GA"), serves on the ATIS Non-IP Call Authentication Task Force ("NIPCA"), the SIP Interconnection Working Group, the North American Numbering Council ("NANC"), and the NANC Call Authentication Trust Anchor Working Group.

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

[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).

The record compiled in response to the NOI demonstrates that the "non-IP gap"[4] in the STIR/SHAKEN ecosystem is considerable. It is not one that uniquely effects carriers of a particular technology, size or geography, but is rather a gap that impacts the entire voice service industry. As a result, millions of consumers in rural and urban areas subscribe to an IP-enabled voice provider that can implement STIR/SHAKEN but is prevented from passing caller-ID authentication data end-to-end due to non-IP facilities in the call path owned by other operators. This renders these IP-enabled providers' investments in this technology useless for caller-ID authentication purposes, and in contravention of the TRACED Act, leaves millions of Americans unable to be protected from "spoofing" and the scams that practice enables.

Fortunately, the Commission has two paths around this non-IP gap, one that the TRACED Act requires it to close. It can mandate that those with non-IP facilities utilize two developed and reasonably available technical solutions for caller-ID authentication across all networks or take steps to further the IP transition and greater IP voice traffic exchange/IP interconnection. The latter would negate the need for the former, and thus those parties complaining of the costs of these non-IP standards can avoid them by moving toward IP voice facilities. These complaints are also specious and belied by the facts, and the Commission should not fall for these obvious stalling tactics.

As noted below, the optimal path to closing the non-IP gap is concrete but limited Commission action to facilitate the IP transition and thereby lead to increased IP voice traffic exchange/IP interconnection industry-wide. NTCA discusses herein steps the Commission can

[4] *FCC Seeks to Fill **Challenging Gap** in STIR/SHAKEN Robocall Defenses, Launches Formal Review of How to Bring Non-IP Phone Networks Into Caller ID Authentication Ecosystem to Protect Consumers*, Press Release, Federal Communications Commission (rel. Oct. 27, 2022) (emphasis added).

and should take to promote the IP transition, steps that are the least intrusive path toward widespread authentication and that bring caller-ID authentication to all consumers as called for by the TRACED Act.

II. THE RECORD DEMONSTRATES THAT NON-IP VOICE SERVICE FACILITIES CREATE A CONSIDERABLE GAP IN THE STIR/SHAKEN ECOSYSTEM, PREVENTING MILLIONS OF AMERICAN CONSUMERS FROM REALIZING THE FULL BENEFITS OF THIS TECHNOLOGY.

The record compiled in response to the NOI demonstrates that three years after the TRACED Act was enacted the full benefits of STIR/SHAKEN caller-ID authentication remain inaccessible to millions of Americans – and this will continue to be the case absent resolution of the non-IP gaps in the STIR/SHAKEN ecosystem. Even worse, many consumers lack access not because their chosen provider is unable to implement STIR/SHAKEN, but rather because other providers in the voice service ecosystem have failed to upgrade their networks and continue to take advantage of the non-IP extension.[5] The Commission has two paths before it that can route the voice service ecosystem around this enduring non-IP barrier and ensure the vision and mandate of the TRACED Act will be realized.

As NTCA noted in its comments, despite its RLEC members' incredible progress with respect to the IP transition – notably the fact that most operate IP switching facilities capable of STIR/SHAKEN caller-ID authentication[6] – the continued presence of non-IP facilities in upstream operators' voice networks remains a barrier to NTCA members' successful use of this

[5] *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*"), ¶¶ 66-71.

[6] 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

critical technology.[7] Because STIR/SHAKEN information generated on an IP network disappears when it traverses any non-IP facility,[8] calls originating on a RLEC network will arrive unauthenticated and they may be unanswered or even blocked because they appear untrustworthy to the extent that any upstream provider along that call path has failed to likewise upgrade its network. Of equal concern, the persistent presence of non-IP facilities means that calls originated and successfully authenticated outside of rural areas and destined for RLEC subscribers will arrive having lost critical STIR/SHAKEN data in transit after traversing non-IP facilities. Rural recipients of these calls will continue to be victimized by spoofing.

While NTCA members face this non-IP barrier, they are far from alone, and the record shows that this issue indeed creates a significant and unacceptably large non-IP gap in the STIR/SHAKEN ecosystem. It is one that stands in the way of operators such as NTCA members from utilizing their IP networks to successfully authenticate calls – *and it is also one that is not limited to NTCA members, to rural, or small, or traditional wireline, operators, but rather is far*

[7] Comments of NTCA–The Rural Broadband Association ("NTCA"), WC Docket No. 17-97 (fil. Dec. 12, 2022), pp. 4-5. With respect to "effective use" of this technology (NTCA's ultimate goal here), the association noted in initial comments that despite having the capability to originate traffic in SIP and use STIR/SHAKEN, the presence of upstream non-IP networks means that authentication information in the signaling of a call originated on a RLEC network is lost, and this "will increasingly cause such calls to be unanswered, at the very least, because they appear untrustworthy." *Id*. As NTCA went on to note, "[o]f equal concern, the persistent presence of non-IP facilities means that calls originated and successfully authenticated outside of rural areas and destined for RLEC subscribers could arrive having lost critical STIR/SHAKEN data in transit after traversing non-IP facilities. Rural recipients of these calls will continue to be victimized by spoofing, and "trust" in the voice network will not be restored for these rural communities." *Id*. *Thus, the ability to implement STIR/SHAKEN within a RLEC network is not the same as the ability to effectively use this technology, and the latter is dependent upon every carrier in the chain of a call utilizing IP facilities*.

[8] As significant volumes of voice traffic from or to the rural areas that RLECs serve are routed through upstream TDM tandem switches, any call authentication information in IP format traversing such facilities is lost.

more widespread. Looking to the record, the Cloud Communications Alliance sums up the current state of affairs for many voice service providers, stating that:

> The telecommunications industry, including members of the Alliance, have invested substantial capital and human resources to implement the STIR/SHAKEN framework. Alliance members have undertaken the expenditure of resources to implement STIR/SHAKEN not only as a matter of regulatory compliance, but it has also been predicated on the expectation that attesting to the authenticity of the caller ID number will help restore trust in the network generally and help ensure that their customers' authenticated calls are less likely to be blocked or mislabeled by terminating or intermediary providers. *This expectation is thwarted, and the resources squandered, by the continuing presence of non-IP networks in the call path that prevent the transmittal of the authentication information to the terminating provider*.[9]

The Competitive Carriers Association, representing small and mid-size mobile wireless operators, demonstrates how this issue is not wireline-specific – like NTCA, they point to upstream operators' non-IP tandem facilities that prevent in and out-bound calls from being successfully authenticated/verified on their networks.[10] NCTA goes beyond showing how this affects cable operators as well, but also zeroes in on where the barrier lies, noting that a "significant percentage of voice traffic exchanged in the U.S. originates or terminates on networks controlled by the major incumbent LECs – namely, Verizon, AT&T, Frontier, and Lumen."[11] NCTA correctly notes non-IP facilities within these networks "break the chain" of IP-enabled (and STIR/SHAKEN-capable) voice networks.[12] For all of the types of providers

[9] Comments of the Cloud Communications Alliance ("Alliance"), WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 2 (emphasis added).

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

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

[12] *Id*. (stating that, "to send traffic to these incumbent providers, providers with IP networks are forced to down-convert their traffic from IP to TDM prior to handing it off, stripping the calls of their associated STIR/SHAKEN authentication information in the process"). NCTA continues on by stating that

listed here, the substantial investments they 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.

Against this backdrop, the Commission should summarily reject the attempt to frame the non-IP barrier at issue herein as a "small gap"[13] in the STIR/SHAKEN ecosystem that should be tolerated indefinitely. As the record demonstrates, many calls *originated and/or terminated on IP networks* all across the nation nevertheless fail to arrive at their destination with STIR/SHAKEN headers intact because they traverse non-IP facilities at some point in the call path.

Moreover, this attempt to frame the non-IP barrier as a "small gap" is not only inconsistent with the facts entered into the record, it also misses the point entirely. The Commission has been charged by the TRACED Act with ensuring that the consumer-protection benefits of caller-ID authentication are available throughout the voice service ecosystem, and it is neither authorized nor empowered to overlook the effects of this "non-IP gap." As NTCA discussed at length in initial comments, nothing in the statute allows for permanent exemptions or long-term extensions for non-IP traffic.[14] To be sure, there is a significant difference of opinion within the industry on <u>*how*</u> to close the non-IP gap (and NTCA for its part agrees with those arguing that the gap can and should be closed through a furthering of the IP transition that

"[t]ransitioning these interconnection points so that traffic can be exchanged entirely in IP would dramatically increase the number of STIR/SHAKEN authenticated calls on U.S. networks." *Id*.

[13] Comments of USTelecom – The Broadband Association ("USTelecom"), WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 3.

[14] NTCA, pp. 13-17.

leads to additional IP traffic exchange/IP interconnection agreements[15]). But dismissing it as a "small gap," or insinuating that because "most" traffic is authenticated this gap may somehow be acceptable, is tantamount to arguing that the consumers continuing to receive spoofed calls (or see their legitimate outbound calls viewed as suspicious) should accept their circumstance. Certainly, Congress never intended such a result, and consumers not able to see the full benefits of STIR/SHAKEN now deserve better.

Additional attempts to downplay this gap, or somehow assert that it is acceptable that the *full* benefits of the STIR/SHAKEN ecosystem will not reach every consumer, miss the mark as well. USTelecom asserts that, "[e]ven if it is not implemented by every portion of every provider's network, the existence of caller ID authentication technology throughout IP networks protects Americans from spoofed robocalls because it erodes scammers' ability to successfully spoof a caller ID."[16] USTelecom asserts that this is the case because, "spoofed calls are increasingly unlikely to make it to consumers and past providers' analytics-based blocking and labeling mechanisms."[17] This assertion overlooks the fact that STIR/SHAKEN headers included in a call are a valuable input into "providers' analytics-based blocking and labeling mechanisms," and can strengthen their ability to root-out illegal or unwanted calls.[18] STIR/SHAKEN headers are incredibly valuable for "traceback" purposes as well, allowing

[15] Comments of the Voice on the Net Coalition ("VON"), WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 1; USTelecom, p. 5; Comments of Verizon, WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 6; NCTA, pp. 2-3.

[16] USTelecom, p. 4.

[17] *Id*.

[18] *See*, Transaction Network Services, TNS Call Guardian, STIR/SHAKEN Capabilities, available at: https://tnsi.com/wp-content/uploads/2022/09/CM_CallGuardianSTIRSHAKEN_GBL_FEB2022.pdf ("Operators can use STIR /SHAKEN, in conjunction with Call Guardian real-time analytics, to determine the validity and intent of a call.").

terminating providers to find the origination point of an illegal robocall and share that with the Commission and law enforcement and put robocalls campaigns to a stop. That they are available to *some consumers misses the point* – every American consumer deserves access to effective traceback and data-analytics based blocking that is as robust as possible, and again, the TRACED Act calls for just that. More specifically, every consumer deserves access to the full benefits of STIR/SHAKEN and not "half-measures." Yet if calls to and from rural areas cannot be successfully authenticated on an end-to-end basis due to the non-IP gap, RLECs cannot deliver the *full* benefits of authentication (robust analytics and traceback included) to millions of rural consumers. Put another way, even if extension of caller-ID authentication technology to most Americans might deter scammers as USTelecom asserts, there will be potentially millions of Americans locked behind TDM facilities whose *legitimate* outbound calls will appear unauthenticated to others and who will face persistent concerns in trusting incoming calls – these implications for rural Americans cannot be simply dismissed as "acceptable loss" in the implementation of STIR/SHAKEN overall.

Attacking the scourge of unwanted and illegal robocalls, and spoofing-enabled scammers, requires "every tool in the toolkit," as the Commission has recognized,[19] and STIR/SHAKEN information leveraged for both blocking/labeling efforts as well as traceback should be a part of every voice service provider's arsenal. Those responsible for these calls can and will exploit

[19] *See*, News Release, *FCC Warns More Providers to Cease and Desist Their Support for Robocallers*, (Jan. 11, 2023) (noting that the FCC has used/authorized, among many other things, tools to attack robocalls such as "Blocking active robocall scam campaigns by issuing first-of-their-kind actions resulting, in the case of a massive auto warranty robocall scam campaign, in a 99% drop in the volume of such calls; Numerous record-breaking spoofing and robocall fines; Closing gateways used by international robocallers to reach Americans' phones; Widespread implementation of STIR/SHAKEN caller ID authentication standards to help traceback illegal calls and improve blocking tools to protect consumers").

every "gap" in the system. Should the Commission accept these "it's only a small gap" arguments, RLECs will be unable to leverage their IP-enabled networks to utilize certain valuable, effective tools to fight these callers – and rural consumers will see calls to and from them increasingly viewed as untrustworthy on an otherwise more reliable series of interconnected networks. Rural consumers deserve better, and their providers should have access to the necessary tools.

III. THE RECORD DEMONSTRATES THAT TWO NON-IP AUTHENTICATION STANDARDS HAVE BEEN "DEVELOPED" AND ARE "REASONABLY AVAILABLE," AND THEREFORE CAN CLOSE THE "NON-IP GAP" IN THE STIR/SHAKEN ECOSYSTEM.

The TRACED Act is an unambiguous directive for widespread caller-ID authentication across all voice networks and, as the Commission has already found, the statute contemplates that those with non-IP facilities will upgrade to IP or implement a non-IP solution once one "has been developed" and is "reasonably available."[20] As the record in this proceeding makes clear, that test as set forth by the Commission more than two years ago has been met by two published and vendor supported technical standards that enable the use of STIR/SHAKEN over non-IP facilities. Parties urging the Commission to avoid mandating their use, or making claims that amount to little more than "stalling" tactics, are as unconvincing in that regard as they are in attempting to minimize the "non-IP gap." The TRACED Act was signed into law more than three years ago to attack the scourge of "spoofing," and the use of non-IP standards can close the gap and allow millions of consumers to realize finally the full benefits of authentication.

[20] *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.") (internal citations and quotations omitted).

To be clear, NTCA members believe that the better path forward is meaningful and effective Commission action to promote IP traffic exchange/IP interconnection agreements between voice service providers and that negates the need for non-IP technical standards as TDM interconnection points are retired. Making this happen does not require a heavy-handed regulatory mandate, but rather can be achieved through surgical and limited Commission action, in the form of clarification of certain responsibilities between voice providers as well as a rethinking of existing rules to ensure that continuation of the IP transition is not inadvertently impeded.

A. The record demonstrates that two published non-IP standards meet the test set forth by the *Second Caller-ID Authentication Report and Order* – the Commission should enforce its existing rules and require providers with non-IP facilities to either upgrade to IP or utilize these non-IP standards to protect consumers.

As NTCA discussed in detail in its initial comments,[21] the Commission has already concluded that the TRACED Act extension granted to those with non-IP facilities applied only "until a call authentication protocol has been developed for calls developed over non-[IP] networks and is reasonably available."[22] As noted further below, "a call authentication protocol has been developed for calls delivered over non-IP networks and is reasonably available," and the Commission must, per its previous edict, revisit the non-IP extension and "shift [the requirement] from focusing on development to focusing on implementation."[23]

---

[21] NTCA, pp. 15-16.

[22] *Second Caller-ID Authentication Report and Order*, ¶ 36 (citing TRACED Act § 4(b)(5)(A)(ii)) (internal quotations omitted). *See also*, *Id*., ¶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)) (internal quotations omitted).

[23] *Id*., ¶ 32. (stating that "we will consider a non-IP caller ID authentication framework to be effective only if it is: (1) fully developed and finalized by industry standards; and (2) reasonably available such that

The record in this proceeding makes clear that a non-IP caller-ID authentication standard has been "fully developed" and "finalized" and is "reasonably available." To begin with, as the NOI acknowledges,[24] two technical standards that allow for the use of STIR/SHAKEN caller ID authentication protocols over non-IP facilities have been published,[25] thus meeting the "fully developed and finalized" test set forth by the Commission.[26] This is undisputed in the record.

Perhaps more importantly, like NTCA, a number of parties point to the "Out of Band" non-IP authentication solution as "commercially available,"[27] thus meeting the "reasonably available" test. It is also important to note that this Out-of-Band ("OOB") solution is available via at least two vendors.[28] The "in-band" or "Shaken over TDM" (ATIS 1000095) standard is

---

the underlying equipment and software necessary to implement such protocol is available on the commercial market. If and when we identify an effective framework, we expect to revisit our 'reasonable measures' requirement and shift it from focusing on development to focusing on implementation.") (emphasis added). In paragraph 68 of the *Second Caller-ID Authentication Report and Order* "fully developed" and "finalized" standard was identical to the "effective framework" standard referenced in paragraph 32.

[24] NOI, ¶ 11.

[25] *See* Press Release, Alliance for Telecommunications Industry Solutions (ATIS), ATIS Addresses Non-IP Call Authentication (Aug. 12, 2021), https://www.atis.org/press-releases/atis-addresses-non-ip-call-authentication/; *See also* ATIS-1000096, Out-of-Band PASSporT Transmission Involving TDM Networks (Jul. 2021); ATIS-1000095, Extending STIR/SHAKEN over TDM (Jun. 2021).

[26] *Second Caller-ID Authentication Report and Order*, ¶ 68. *See also*, *Id*., fn. 268 (By 'fully developed' and 'finalized' we do not require that the protocol must have achieved a status whereby no future development or progress is possible. Under that interpretation, the STIR/SHAKEN framework itself would not meet this standard. Instead, our standard does not foreclose the possibility of further development and improvement, but would only determine a protocol has been developed if at least all fundamental aspects of the protocol which enable its effectiveness are standardized by industry, and the protocol is implementable by voice service providers."). Thus, the fact that the NIPCA is at present continuing to discuss the non-IP standards does not mean the standards are not "fully developed" and "finalized."

[27] Alliance, p. 3 ("The out-of-band solution is commercially available"). *See also*, Comments of TelecoBridges, WC Docket No. 17-97 (fil. Dec. 12, 2022), pp. 3-5.

[28] Alliance, p. 3.

commercially available as well – when referring to both technical standards, TelcoBridges states that it, "supports both mechanisms as a policy matter and offers technology solutions for both."[29]

It is important to emphasize that these published and "reasonably available" non-IP solutions are not theoretical technical standards that exist only on paper, and any assertions that they are "unproven"[30] are inconsistent with facts found in the record. As the Cloud Communications Alliance states, "TelcoBridges, a manufacturer of session border controllers and media gateways that can mediate between TDM and IP networks, and TransNexus, have successfully demonstrated an in-band solution based on the ATIS-1000095.v002 standard."[31] In addition, they note that, "Neustar also offers an out-of-band solution and, in cooperation with ATIS, the Neustar Robocall Testbed enables testing of the out-of-band solution."[32] Moreover, this "testing" is not of the mere "viability" of this standard but rather involves testing of "interoperability," enabling operators to ensure their networks transmit and verify the necessary caller-ID authentication data in the manner intended by the standard.

In addition, as Wabash Communications has repeatedly stated,[33] it has effectively implemented the Out-of-Band solution and has successfully exchanged authenticated voice

[29]TelecoBridges, p. 4.

[30] Verizon p. 2; USTelecom, p. 3.

[31] Alliance, p. 4.

[32] *Id*., p. 3 citing ATIS, Neustar, Inc., ATIS Robocalling Testbed Expands Feature Set to Enhance Call Authentication Interoperability, Neustar, Inc., A TransUnion Company (Nov. 15, 2022), https://www.home.neustar/about-us/news-room/press-releases/2022/atis-robocalling-testbed-expandsfeature-set; ATIS, Neustar, Inc., ATIS Robocalling Testbed Expands Feature Set to Enhance Call Authentication Interoperability, ATIS (Nov. 15, 2022), https://www.atis.org/press-releases/atisrobocalling-testbed-expands-feature-set-to-enhance-call-authentication-interoperability/.

[33] Wabash Communication, *ex parte* letter, WC Docket No. 17-97 (fil. Aug. 17, 2021), p. 2 ("Wabash has been using Out-of-Band technology to authenticate calls on live PSTN traffic for over a year and has

traffic with other several other operators. Another group of voice service providers have, like Wabash, indicated their use of this standard to successfully authenticate calls on an end-to-end basis.[34]

Thus, the record makes clear that the "workable and clear standard"[35] for judging whether the non-IP extension should remain in place and as set forth by the Commission more than two years ago has been met, with two technical standards "developed" by a standards body and "reasonably available" through the vendor community. The Commission – and the industry through its two years of work via the NIPCA – have fulfilled their TRACED Act duty to *develop* a non-IP solution, and nothing in the record supports further delay in *implementing* one or both.

B. The Commission should dismiss unsupported opposition to the non-IP standards.

Those few parties opposing use of the non-IP standards offer (1) pushback that is inconsistent with the facts in the record; (2) "security" concerns that have been discussed and addressed by the standards body process; and (3) little in the way of any alternatives with respect to closing the non-IP gap. Taking these "stall tactics" at face value would be a disservice to the millions of consumers unable to access the full benefits of STIR/SHAKEN technology.

To begin with, the Verizon and USTelecom assertions that the non-IP standards at issue herein are "unproven"[36] are belied by the facts. As noted above, they are in use today, and any

---

successfully authenticated more than 1,868,414 calls in rural southern Illinois."); Reply comments of Wabash Communications, WC Docket No. 17-97 (fil. May 29, 2020), p. 2.

[34] *See* Brightlink, *ex parte* letter to Marlene H. Dortch, WC Docket No. 17-97 (fil. May 15, 2020); New Lisbon Telephone Company *ex parte* letter to Marlene H. Dortch, WC Docket No. 17-97 (fil. Apr. 30, 2020).

[35] *Second Caller-ID Authentication Report and Order*, ¶ 68.

[36] Verizon, p. 2; USTelecom, p. 3.

voice service provider can implement the OOB standard and engage in interoperability testing with other operators.

Claims that the standards are not "developed" per the *Second Caller-ID Authentication Report and Order* miss the mark as well. While Verizon asserts that, "the NIPCA Task Force's work has been limited to the technical issues associated with developing these standards, and does not include the critical business, policy, security, and governance issues associated with the three deliverables that the NIPCA Task Force has published regarding non-IP call authentication,"[37] this misleading list of assertions fall apart under further scrutiny. The NIPCA, like any technical standards body, was never intended to address "business, policy, or governance" issues, and the attempt to frame the process of developing the standards as somehow flawed/incomplete is disingenuous at best. As to the "policy" issues that Verizon alludes to (but never specifies), these likely fall within the purview of the Commission, as the agency charged by the TRACED Act with ensuring widespread authentication, rather than the NIPCA. In some cases, "policy" may be determined by a governance authority such as the STI-GA, but in any case, it is certainly not a surprise or cause for further delay that they were not addressed by NIPCA. To the extent "business issues" are a proxy for "cost" concerns (again, Verizon fails to articulate what this means), Verizon certainly can avoid utilizing these non-IP standards and assuming the associated costs or dealing with any "business issues" they cause by moving away from non-IP facilities within its voice network.

The Commission should also reject any attempts to throw "governance" roadblocks in front of closing the non-IP gap. The STI-GA was founded as a "technology neutral" entity –

[37] Verizon, p. 5.

nothing in the STI-GA's founding operating procedures adopted in 2018 make a distinction between IP or non-IP technology. Moreover, even as that body's role (and that of the Policy Administrator) would be expanded, the Commission (and those participating in the STI-GA) owe it to consumers to accept this expanded scope of work,[38] and the former can include it as part of a mandate to utilize these standards as part of fulfilling its duty under the TRACED Act. Indeed, the Commission should dismiss the obvious "stalling tactics" being deployed here, and at the very least ask those entities citing this governance "concern" to explain why proposals for a non-IP governance process/entity have not been forthcoming on their part over a year after this "concern" was raised.[39]

Moreover, it is misleading to assert that "security" concerns have not been a part of the NIPCA discussions or have not been properly addressed. For example, in asserting that "PSTN networks are still able to originate traffic with fraudulent ANI/DNIS,"[40] Verizon overlooks that this issue was raised and addressed in ATIS 1000097v2.[41] That document found that the vulnerabilities to which Verizon points could only be exploited in very narrow circumstances, and it included mitigation techniques to address such concerns. Interestingly, that document also noted that "[a]s TDM networks transition to IP, the need for [these mitigation techniques] will

[38] USTelecom attempts to assert that among the many governance issues with respect to the non-IP standards, "[t]he STI-GA consists of industry representatives that volunteer their time." USTelecom, p. 18. NTCA, as a founding member of the STI-GA, is more than willing to volunteer additional time.

[39] *Deployment of STIR/SHAKEN by Small Voice Service Providers*, NANC Call Authentication Trust Anchor ("CATA") Working Group (approved by the NANC Oct. 13, 2021) ("*CATA WG Report*"), p. 15 (stating that the CATA WG should "***expeditiously*** study alternatives and recommend a governance structure as well as any action the FCC needs to take") (emphasis added), available at: https://nanc-chair.org/docs/October_13_2021_CATA_Working_Group_ Report _ to _ NANC.pdf.

[40] Verizon Exhibit A, p. 3.

[41] ATIS-1000097.v002, Alternatives for Call Authentication for Non-IP Traffic (Sep. 2, 2022), p. 12-13.

decrease and eventually disappear."[42] In other words, Verizon's concern could also be mitigated by the IP transition and a move away from their TDM facilities.

Concerns with respect to "CPNI vulnerability"[43] created by the use of the Out-of-Band solution are misplaced as well. As Transnexus notes, this concern too was addressed by the NIPCA, which recommended among other things that "only authorized members of the SHAKEN ecosystem have access to the CPS network."[44] Thus, only those approved and trusted service provider representatives would have access to CPNI. Thus, the assertion that "private investigations, domestic abusers"[45] among others would have access to CPNI is misplaced.

Finally, the Commission should not be swayed by any assertion that a non-IP authentication mandate would delay the IP transition by forcing operators to invest in and hold on to TDM networks. It would seem that some operators have found a way to hold on to these facilities of their own accord, and this is the case approximately ten years after the "IP Transition" was formally launched in the form of a Commission proceeding and with the intent of easing providers' path toward IP-enabled products and services.[46] It certainly cannot be argued that these operators are "caught off guard" by a potential non-IP mandate in this proceeding, as three years ago the TRACED Act gave these operators a clear choice to upgrade to IP or use a non-IP standard once developed. In fact, these are the very same operators that

---

[42] *Id*., p. 13.

[43] Verizon, Exhibit A, p. 5.

[44] Comments of TransNexus, WC Docket No. 17-97 (fil. Dec. 12, 2022). p. 10.

[45] Verizon Exhibit A, p. 5.

[46] News Release, *FCC Chairman Julius Genachowski announces the formation of an agency-wide Technology Transitions Policy Task Force* (rel. Dec. 10, 2012).

issued repeated and urgent warnings several years ago stating that mandates touching TDM facilities, in the context of the Commission's 988 suicide hotline proceeding, were ill-advised.[47] Despite breathless claims there that aging and no longer vendor-supported TDM switching facilities were incapable of compliance with a requirement to route calls placed to 988 to the suicide hotline, much of this equipment remains in their networks today. Indeed, it is difficult to take at face value assertions that the ongoing IP transition will soon see these facilities go away organically when the 988 proceeding and the passage TRACED Act were insufficient to spur them into action. Unfortunately, after all of this, the non-IP gap remains, and Commission action must be taken to remove it.

C. The optimal path to closing the non-IP gap is concrete but limited Commission action to facilitate the IP transition and thereby lead to increased IP voice traffic exchange/IP interconnection industry-wide.

A frequently raised discussion point with respect to the non-IP standards is that encouraging the IP transition is the more efficient path toward widespread, successful caller-ID authentication.[48] NTCA agrees wholeheartedly that furthering the IP transition and moving away from non-IP interconnection points is the optimal path, yet it urges the Commission to recognize that neither additional "encouragement" on the Commission's part or "half-measures" will suffice here. *In fact, the Commission over two years ago in this proceeding "encouraged" providers to prioritize the IP transition, and yet the non-IP gap persists.*[49] Cajoling and

[47] Comments of USTelecom, WC Docket No. 18-336 (fil. Feb. 14, 2020), pp. 13-14; Reply comments of CenturyLink, WC Docket No. 18-336 (fil. Mar. 16, 2020), pp. 5-6.

[48] USTelecom, p. 13; Verizon, p. 1.

[49] *Second Caller-ID Authentication Report and Order*, ¶ 24. ("By adopting rules that are not overly burdensome, we leave voice service providers free to prioritize transitioning to IP, and we strongly encourage voice service providers to take advantage of this opportunity to do so.").

cheerleading standing alone clearly will not promote this transition. Instead, concrete and carefully targeted action to spur the next step in the IP transition, and as an alternative to a non-IP call authentication mandate, offers a far better path to widespread STIR/SHAKEN availability.

To their credit, in looking to further the IP transition and in turn promote widespread caller-ID authentication, Verizon and USTelecom propose "[s]treamlining service discontinuance requirements."[50] Certainly, NTCA takes no issue with the underlying sentiment – to the extent that any of the Commission's rules implementing Section 214 of the Communications Act of 1934, as amended, preclude or even discourage any party from retiring its non-IP facilities and migrating to an IP-enabled network instead, the Commission should enact targeted relief to address this concern.

But such measures alone with not address the fundamental issue with respect to the persistent presence of non-IP facilities in the form of carrier tandems and transport facilities, and the Commission should take stock too of the *entirety* of any impacts arising out of potential means of facilitating IP transitions. For example, as NTCA has noted on multiple occasions over many years, larger carriers have made no secret of their desire to move away from existing TDM interconnection points and instead towards a handful of points of interconnection around the nation.[51] Such a move most certainly would shift the costs of voice traffic exchange onto

[50] Verizon, p. 5.

[51] *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, GN Docket No. 09-51 (fil. Oct. 3, 2011) (arguing for "the more efficient regional interconnection arrangements typically used for non-voice IP traffic"). As NTCA has stated, "as a

RLECs and their small rural customer bases, in turn raising voice service rates. And, by taking such a position, the larger carriers have effectively shut the door to the establishment of mutually beneficial IP interconnection agreements for voice traffic exchange with many other carriers, especially those smaller carriers which have limited service areas and transport networks and already face very real universal service concerns.

The Commission should not – and need not – accept this trade off, the foisting of costs for exchanging voice calls from larger national and regional operators where they reside today onto small rural customer bases, as part of promoting the IP transition. Specifically, the Commission can sidestep a non-IP mandate, protect rural consumers from these consequences, and further the IP transition via a simple "network edge" rule that establishes a simple "default" apportionment of costs among operators. While calls may route through a variety of IP-enabled interconnects (or to multiple points) to reach their destination, the Commission should declare that any RLEC will not be financially responsible as a matter of cost for more than it bears today in routing such calls through existing TDM-based interconnections with other voice service providers. To operationalize this, as a default, any party exchanging traffic with a RLEC would be financially responsible to interconnect with a RLEC in IP at the RLEC's existing network or other currently established interconnection point – in the alternative, the parties may mutually

---

general matter, most RLECs are not financially responsible today for exchanging non-local voice traffic at points outside their "network edge," which is typically a point on the RLEC network or a long-established mutually agreed upon point of interconnection elsewhere between RLECs and other operators with whom they exchange traffic. This long-standing apportionment of costs helps ensure that RLEC subscribers' rates for voice services remain reasonably comparable to those enjoyed by urban consumers. If small rural providers are required, however, to establish new routes for IP interconnection with large national providers – likely requiring multiple routes to exchange calls with each larger operator – and must bear full financial responsibility for doing so, the costs of exchanging voice traffic with other operators will increase and will, for the first time ever, need to be recovered entirely from small rural customer bases."). NTCA, pp. 6-7.

agree to meet and bear relative financial responsibility to interconnect via IP at a different meet point.

This framework, in addition to protecting rural consumers, would have several benefits that should hasten the widespread adoption of STIR/SHAKEN as well as the availability of IP interconnection for voice traffic. For one, all underlying networks would continue to be subject to the same well-known and well-understood responsibilities to meet at the same places for the exchange of voice calls as they have in the past (again, in the absence of mutual agreement to change them). This preservation of existing well-known and well-defined constructs should in fact expedite the implementation of IP voice interconnection arrangements and the ensuing implementation of STIR/SHAKEN across all networks because all parties' relative responsibilities would be clearly defined in advance as a default. In fact, those operators with whom RLECs exchange traffic at tandems today would perhaps take the regulatory certainty this provision would produce and, knowing the "basic rules of the road," would be more likely to offer IP interconnection where they have not before. Just as importantly, this would ensure that RLECs could fully participate in the STIR/SHAKEN ecosystem without also assuming new and significant costs of interconnecting at distant locations. Rural consumers deserve access to caller-ID authentication as well as continued affordability of voice rates.

It is worth reiterating that this IP transition path around the non-IP gap in the STIR/SHAKEN ecosystem is NTCA members' preferred path to mandating implementation of authentication technology on non-IP networks. And, a "network edge" rule that preserves existing cost apportionment, paired with the streamlining of IP transition rules, is certainly much less heavy-handed than a non-IP authentication mandate. Per the *Second Caller-ID Authentication Report and Order* adopted to implement the TRACED Act, however, the

Commission has little choice but to choose one of these paths – NTCA members and consumers all across the nation deserve better than "stall tactics" that leave calls to and from them unauthenticated through no fault of their own and despite the widespread availability of authentication for other voice callers.

IV. CONCLUSION.

For all of the reasons stated above, the Commission should enforce 47 C.F.R. § 64.6303 of its rules and require those with non-IP facilities to upgrade to IP or utilize a non-IP caller-ID authentication solution.

Respectfully submitted,

By: /s/ Michael R. Romano
Michael R. Romano
Executive Vice President
mromano@ntca.org

By: /s/ Brian J. Ford
Brian J. Ford
Vice President – Federal Regulatory
bford@ntca.org

4121 Wilson Boulevard, Suite 1000
Arlington, VA 22203

January 23, 2023