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

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

COMMENTS
OF
NTCA–THE RURAL BROADBAND ASSOCIATION

Respectfully submitted,

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Executive Summary

The TRACED Act mandates that *all* voice service providers implement caller ID authentication technology within their networks. Congress clearly understood that non-IP facilities remained in service across the nation's voice network as of the act's passage and that it would take time to develop methods to authenticate calls over such networks. But the TRACED Act did not countenance a permanent or even long-term reprieve from authentication requirements. Rather, the TRACED Act dictates that once a non-IP caller ID authentication solution is developed by a standards body, reasonably available from the vendor community, and effective at authenticating calls, providers with non-IP facilities must either: (1) implement such a solution; *or* (2) upgrade those facilities to IP.

Over the past six years, three non-IP authentication solutions have been published by an ATIS technical standards body – each is presently available to operators of non-IP networks to authenticate caller ID and is effective at doing so. Nonetheless, these solutions have not been widely adopted because there has been no mandate yet from the Commission pursuant to the TRACED Act to do so. Instead, non-IP providers continue to operate under the prior exemption to authentication, to the detriment of consumers. Indeed, data cited in the NPRM indicates that more than half of the voice calls originated within the U.S. arrive at their destination lacking authentication data.

Ideally, non-IP providers would upgrade their networks to IP, thereby mitigating the need to invest in costly authentication solutions for aging legacy non-IP networks. In some cases, however, even a provider interested in making such upgrades (or who has already done so) still cannot participate fully in authentication frameworks if its call routing depends upon routing through non-IP networks owned by *other* operators. Thus, the Commission should approach this

proceeding with two goals in mind: (1) adopting and/or reforming rules to facilitate the IP transition to the greatest extent possible; while (2) ensuring the implementation of non-IP call authentication solutions where needed. To achieve the first goal, the Commission should leverage complementary technology transitions proceedings *both* to remove barriers to IP transitions *and* to create reasonable, clear, and simple "rules of the road" that will foster greater regulatory and economic certainty in IP interconnection. To achieve the second goal, the Commission should, as described further herein, mandate the implementation of non-IP call authentication solutions on legacy networks (which, in itself, may be an incentive to upgrade networks to the extent providers wish to avoid the costs of doing so). It should also pair the relative timing of such implementation *with* the adoption of an interconnection backstop, so that all providers then have a meaningful choice between "going all IP" and investing in non-IP call authentication.

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I. INTRODUCTION

NTCA–The Rural Broadband Association[1] hereby submits these comments in response to the Notice of Proposed Rulemaking[2] issued by the Federal Communications Commission ("Commission") in the above-captioned TRACED Act[3] proceeding. The NPRM specifically seeks to address the fact that (1) caller ID authentication information generated using the STIR/SHAKEN protocols is lost if a call traverses non-IP network facilities at any point in the call path and (2) the TRACED Act explicitly mandates caller ID authentication across *all* voice networks. The NPRM proposes to conclude that at least two technical standards[4] can be utilized

[1] NTCA–The Rural Broadband Association represents approximately 850 community-based companies and cooperatives that provide advanced communications services in rural America and more than 400 other firms that support or are themselves engaged in the provision of such services. In the context of offering voice services, many NTCA members are incumbent local exchange carriers and rural telephone companies as defined in the Communications Act of 1934, as amended, and are referred to herein as "rural local exchange carriers" or "RLECs." NTCA is also a founding board member of the Secure Telephone Identity Governance Authority (STI-GA) and has served on the Alliance for Telecommunication Industry Solutions (ATIS) Non-IP Call Authentication Task Force ("NIPCA") since its inception.

[2] *Call Authentication Trust Anchor*, WC Docket No. 17-97, Notice of Proposed Rulemaking, FCC 25-25 (rel. Apr. 29, 2025) ("NPRM").

[3] Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act, Pub. L. No. 116-105, (2019) ("TRACED Act").

[4] The NPRM proposes to conclude that two non-IP caller ID authentication standards – In-Band Authentication (ATIS-1000095.v002) and Out-of-Band Multiple STI-CPS Authentication (ATIS-

today to authenticate calls that traverse non-IP networks.[5] Finally, the NPRM proposes to "repeal the continuing extension from call authentication obligations for providers relying on non-IP network infrastructure [and] require that such providers either upgrade their networks to IP or implement one or more non-IP caller ID authentication solutions."[6]

As discussed further herein, three published technical solutions in fact meet the requirements of the TRACED Act. Per the text of the TRACED Act, the Commission must now offer non-IP providers a clear binary choice: either implement one of the non-IP solutions or upgrade their networks to IP. To make the second option more meaningful and viable, however, the Commission can and should take additional steps at the same time to facilitate upgrades to IP by: (a) removing or clarifying rules that inhibit this transition; *and* (b) establishing reasonable, clear, and simple "rules of the road" that will foster greater regulatory and economic certainty in IP interconnection.

II. THE TRACED ACT REQUIRES THAT SERVICE PROVIDERS WITH NON-IP NETWORKS EITHER (1) IMPLEMENT SOLUTIONS THAT AUTHENTICATE CALLS OVER SUCH NETWORKS OR (2) UPGRADE ANY SUCH FACILITIES TO IP.

A. The plain language of the TRACED Act mandates caller ID authentication across all voice networks, and permits neither permanent exemptions nor long-term extensions.

As the NPRM states, "[i]n the TRACED Act, Congress made clear its intention for all calls to be authenticated, and that it did not intend for the non-IP implementation extension to

1000096) – satisfy the TRACED Act's requirements using the Commission's proposed criteria for evaluating non-IP frameworks. NPRM, ¶ 34.

[5] The NPRM also seeks comment on whether the Out-of-Band Agreed STI-CPS Authentication (ATIS-1000105) standard meets these requirements as well. *Id*.

[6] *Id*., ¶ 42.

last indefinitely."[7] The TRACED Act thus compels voice service providers with non-IP facilities to either upgrade those to IP or to implement a non-IP authentication standard once the technical means to do so is available.

> Pursuant to Section 4(b) of the TRACED Act, the Commission is directed to:
>
> (A) require a provider of voice service to implement the STIR/SHAKEN authentication framework in the internet protocol networks of the provider of voice service; and
>
> (B) require a provider of voice service to take reasonable measures to implement an effective call authentication framework in the non-internet protocol networks of the provider of voice service.[8]

Interpreting Section 4(b)(1)(B) of the TRACED Act in 2020, the Commission stated that:

> [W]e interpret the TRACED Act's requirement that a voice service provider take 'reasonable measures' to implement an effective caller ID authentication framework in the non-IP portions of its network as being satisfied only if the voice service provider is actively working to implement a caller ID authentication framework on those portions of its network. A voice service provider satisfies this obligation by either (1) completely upgrading its non-IP networks to IP and implementing the STIR/SHAKEN authentication framework on its entire network, or (2) working to develop a non-IP authentication solution.[9]

At the time the Commission issued this interpretation of the TRACED Act, there existed only one *draft* standard for caller-ID authentication over non-IP facilities.[10] The Commission thus enabled those materially relying on non-IP facilities to fulfill the TRACED Act's "reasonable efforts" to develop non-IP solutions by "participating…as a member of a working group, industry standards group, consortium, or trade association that is working to develop a non-IP

[7] *Id*., ¶ 48.

[8] TRACED Act, § 4(b)(1)(A)-(B), codified at 47 U.S.C. § 227b(b)(1)(A)-(B).

[9] *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*"), ¶ 24.

[10] *Id*., ¶ 31.

solution, or actively testing such a solution."[11] Those operators were also at that time given the alternative of "completely upgrading [their] non-IP networks to IP and implementing the STIR/SHAKEN authentication framework on [their] entire network."[12]

Critically, Section 4(b)(5)(B) of the TRACED Act directs the Commission to "grant a delay of required compliance" with any caller ID authentication implementation date it sets "to the extent that…a provider or class of providers of voice service, or type of voice calls, materially relies on a non-[IP] network for the provision of such service or calls…***until*** a call authentication protocol has been developed for calls developed over non-[IP] networks and is reasonably available."[13] One would be hard pressed to argue that in using the words "delay" and "until" Congress meant to grant an exemption or even a prolonged and seemingly unending extension. Rather, this language is more reasonably read to require non-IP providers to begin working on a non-IP authentication solution in response to the TRACED Act's passage and implement it once one was available to the extent they will not or cannot transition to IP.

Congress, through the TRACED Act, expressed its unambiguous intent for *every* voice call to be authenticated and verified on an end-to-end basis. While recognizing that STIR/SHAKEN for non-IP networks was not possible at the time of passage, Congress did not contemplate a permanent non-IP exemption. Rather, it identified a simple binary choice for providers seeking to overcome the non-IP authentication barrier – either upgrade to IP or implement a non-IP authentication solution once available.

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[11] *Id*., ¶ 70.

[12] *Id*., ¶ 24.

[13] TRACED Act § 4(b)(5)(B) (emphasis added). *See also Second Caller ID Authentication Report and Order*, ¶ 36.

B. Even if a provider has upgraded to IP, its ability to participate in call authentication can be undermined, if not defeated, by *other carriers*' non-IP networks.

As the Commission knows,[14] the STIR/SHAKEN caller ID authentication standard[15] was developed for "all-IP" networks. Successful authentication and verification of a call through STIR/SHAKEN is only possible if a voice call traverses an IP network on an end-to-end basis; authentication information that accompanies an IP-originated call is lost if the call traverses any non-IP facilities at any point.

This means that it is not enough merely for a provider to upgrade *its own* network; for authentication and verification to be truly successful consistent with the vision of the TRACED Act, the Commission must address *the connections between networks* as well. Otherwise the Commission could effectively be mandating islands of authentication compliance surrounded by oceans where call authentication sinks. Indeed, many small rural providers, even if they are entirely IP-capable within their own networks, subtend upstream non-IP tandem facilities owned and operated by larger national and regional operators.[16] NTCA member survey data indicates that approximately 83 percent of the association's members have some presence of IP switching

[14] NPRM, ¶ 9 ("While effective, STIR/SHAKEN only works in IP networks. Although many providers exclusively use IP networks, some still rely on non-IP facilities. When a call routes through a non-IP network segment, the STIR/SHAKEN information is stripped out, thereby creating gaps in the caller ID authentication scheme.") (internal citations omitted).

[15] ATIS & SIP Forum, Signature-based Handling of Asserted information using toKENs (SHAKEN), ATIS-1000074.

[16] NTCA is aware that its RLEC members as well as numerous other similarly situated operators subtend non-IP tandems all across the nation. *See* Comments of the Competitive Carriers Alliance, WC Docket No. 17-97 (fil. Dec. 12, 2022), pp. 1- 2 (stating that with respect to the non-IP gap in caller ID authentication, one "obstacle the Commission should focus on is a small number of carriers' use of upstream time division multiplexing ("TDM") tandem switches that prevent the transmission of IP-based call authentication information from call originators to call terminators.")

facilities within their networks today[17] that are used to generate STIR/SHAKEN caller ID authentication data. Despite making the investment in modern IP networks as well as investing in STIR/SHAKEN capability,[18] the typical NTCA member is unable to leverage these capabilities for the vast majority of calls routing to and from its subscribers.[19]

Consumers across the nation are being denied the benefits of STIR/SHAKEN as a result. As the NPRM acknowledges, "as many as 57.2% of calls that may be signed by the originating provider reach their destination unsigned."[20] To be clear, this is not a phenomenon unique to NTCA members or rural or residential subscribers. As NCTA noted in response to a 2022 Notice of Inquiry in this proceeding, "terminating providers are still receiving billions of calls from upstream providers without authentication information."[21] The Cloud Communications Alliance in that same proceeding pointed to the "continuing presence of non-IP networks in the call path that prevent the transmittal of the authentication information to the terminating provider."[22] A group of associations representing the financial services agency discussed as well

[17] *Broadband/Internet Availability Survey Report*, NTCA–The Rural Broadband Association, (Dec. 2024), p. 4, available at: https://www.ntca.org/sites/default/files/documents/2025-01/2024-broadband-internet-availability-report.pdf.

[18] NTCA members with 100,000 or fewer access lines were required to adopt STIR/SHAKEN within their IP networks by June 30, 2023. *Second Caller ID Authentication Report and Order*, ¶ 40.

[19] RLECs with IP switching capabilities are today authenticating calls on those facilities, yet except for limited circumstances in which they are able to obtain direct interconnection in IP (usually with another local voice provider), these operators' STIR/SHAKEN information disappears when handed off to other providers' non-IP networks. This "authentication to nowhere" scenario undermines the goal of the TRACED Act.

[20] NPRM, fn. 12, citing TransNexus, STIR/SHAKEN statistics from January 2025 (Mar. 4, 2025), https://transnexus.com/blog/2025/shaken-statistics-february/

[21] Comments of NCTA – The Internet & Television Association ("NCTA"), WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 1.

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

how STIR/SHAKEN can prevent "spoofing [that leads a call] recipient to believe the call was placed by a company with whom the recipient does business and to induce the consumer to provide important information, such as account numbers or log-in credentials, to the fraudster."[23] Yet as that group of associations noted, there is "evidence showing that the presence of non-IP networks is substantially undermining the STIR/SHAKEN framework."[24] Importantly, each of these parties discuss in those filings the substantial expense they have incurred to protect their subscribers/customers from unwanted and "spoofing-enabled" fraudsters, efforts that are for so many calls wasted as they traverse non-IP facilities.[25]

For consumers, the consequences of this "non-IP gap" in caller ID authentication are very real. The absence of authentication information in the signaling of a call will increasingly cause such calls to be unanswered, at the very least, because they appear untrustworthy. Indeed, the NPRM acknowledges these consequences stating that, "[t]he loss of STIR/SHAKEN information for calls that traverse non-IP networks significantly undermines the value of the framework as a whole—in many cases negating the value of the investment providers have made to authenticate their calls and leading to improper spam labeling or blocking by downstream providers."[26] Of

[23] Comments of the American Bankers Association, ACA International, American Financial Services Association, Credit Union National Association, Mortgage Bankers Association, National Association of Federally-Insured Credit Unions, National Council of Higher Education Resources, and Student Loan Servicing Alliance (the "Associations"), WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 3.

[24] *Id*., p. 5.

[25] *Id*. ("Both network providers and companies have invested resources to implement STIR/SHAKEN. This investment is being undermined by the continuing prevalence of non-IP networks, and the laudatory goal of STIR/SHAKEN to prevent illegal number spoofing is not being met.").

[26] NPRM, ¶ 3.

equal concern, recipients of "unsigned" calls will continue to be victimized by spoofing, and "trust" in the voice network will not be restored.

The Commission need not, and indeed cannot under the TRACED Act, allow this to continue. As noted above, the text of the TRACED Act makes clear that Congress did not intend for the "non-IP gap" in caller-ID authentication to persist beyond the emergence of technical solutions to close it. Solutions to close that gap – developed by a standards body, reasonably available from the vendor community, and effective at authenticating calls – have now emerged. Thus, it is time to require implementation of these non-IP solutions where providers cannot or will not transition to IP *and* to adopt reasonable, clear, and simple "rules of the road" that will promote IP interconnection where this transition is made.

C. Published non-IP technical standards can enable widespread availability of caller ID authentication.

Consistent with the TRACED Act and the Commission's prior interpretation of it,[27] the NPRM proposes criteria to evaluate non-IP call authentication solutions, specifically considering whether a particular solution is "developed and reasonably available" and is "effective."[28] Three published technical standards for authenticating calls over non-IP networks – In-Band Authentication (ATIS-1000095.v002), Out-of-Band Multiple STI-CPS Authentication (ATIS-1000096), and Out-of-Band Agreed STI-CPS Authentication (ATIS-1000105) – meet these criteria.

[27] *Second Caller ID Authentication Report and Order*, ¶ 24.

[28] NPRM, ¶¶ 22-33.

First, each of these three non-IP standards are "fully developed and finalized by industry standards."[29] Each standard was written and exhaustively reviewed by the NIPCA, a working group of industry experts[30] formed in 2020 under the auspices of ATIS ("a well-established standards development organization"[31] as the NPRM acknowledges). NIPCA's work on these standards has included publication of the standards themselves, as well as consideration and publication of a "technical report"[32] and a "viability report"[33] discussing implementation of the standards. To the extent any claim is made that any of these standards require "further development and improvement,"[34] and thus making implementation premature, the Commission has already recognized that ATIS 10000.74, the STIR/SHAKEN standard it mandated voice providers utilize in their IP networks, has been updated since its initial publication.[35]

Second, each of these standards is "reasonably available" from vendors serving the voice services space. As the NPRM acknowledges, "[r]ecord evidence (from December 2022 and

[29] *Id*., ¶ 25.

[30] The membership of the NIPCA includes service providers of all sizes, all technologies (wireline, wireless, VoIP) as well as several vendors offering caller ID authentication and other related services, and entities operating in the fraud mitigation, numbering administration, and call routing spaces, among others. The membership list is available at: https://atis.org/committees-forums/ptsc/non-ip-call-authentication-task-force-members/.

[31] NPRM, ¶ 35.

[32] ATIS, Alternatives for Call Authentication for Non-IP Traffic (2024) (ATIS-1000097.v003), available at:https://access.atis.org/higherlogic/ws/public/download/79507/ATIS-1000097.v003.pdf.

[33] ATIS, Viability of Non-IP Call Authentication Standards at 6 (2024) (ATIS-1000106), available at: https://access.atis.org/higherlogic/ws/public/download/79510/ATIS-1000106.pdf.

[34] NPRM, ¶ 25.

[35] *Second Caller ID Authentication Report and Order*, ¶ 68 ("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 . . . .").

January 2023) indicates that frameworks using In-Band Authentication and Out-of-Band Multiple STICPS Authentication have been implemented by some providers, which suggests that the necessary equipment and software is commercially available."[36] Telcobridges has stated that it offers solutions for two of the standards,[37] and Transnexus indicated that in 2023 approximately 50 providers were utilizing the ATIS-1000096 Multiple STI-CPS to successfully authenticate calls.[38]

Finally, these standards are "effective" as required by the TRACED Act. On this point, the NPRM correctly states that, "record evidence of deployments of In-Band Authentication and Out-of-Band Multiple STI-CPS Authentication frameworks in the marketplace are *prima facie* evidence that [ATIS-1000095.v002 and ATIS-1000096] frameworks are in fact operating to authenticate calls as described in each standard."[39] In other words, the fact that providers are using these standards to authenticate calls over non-IP networks today demonstrates the standards are capable of doing so.

D. A non-IP authentication mandate could become practically irrelevant, however, if the Commission takes effective further action to promote the IP transition.

As discussed above, the TRACED Act presents a simple binary choice when it comes to mandatory call authentication: transition to IP capabilities for use of STIR/SHAKEN or implement non-IP standards for providers with such facilities still in place. The Commission can and should consider what steps it could take to help and incent providers to elect the first option

[36] NPRM, ¶ 36.

[37] Comments of TelcoBridges, WC Docket No. 17-97 (fil. Dec. 12, 2022), p. 4.

[38] NPRM, ¶ 36.

[39] *Id*., ¶ 38.

– transitioning to greater use of IP-enabled networks and interconnection arrangements – so that providers need not implement potentially costly upgrades to non-IP networks for purposes of call authentication compliance.

1. The Commission should facilitate migration from non-IP facilities.

NTCA members have long been committed to the IP transition.[40] These operators have a track record of investing in cutting-edge networks capable of delivering advanced services in deeply rural America. NTCA's most recent member survey found that on average 86% of members' customers are connected by fiber-to-the-premises networks, and as noted above, 83% have some IP-enabled switching capabilities within their networks today.[41] The full benefits of the latter capabilities are undermined, however, where other carriers' non-IP networks operate as a barrier to successful authentication of most calls routed to and from their subscribers. In these instances, NTCA members' significant investment in STIR/SHAKEN capabilities is largely wasted, and even worse, rural consumers continue to be victimized by spoofing-enabled scammers and calls from rural areas are undoubtedly viewed as less trustworthy. In addition, call-blocking notifications – transmitted to calling parties in the event their calls are blocked at the network level by terminating providers and offering the calling party the ability to initiate a "redress" process – are less effective as critical information is lost as they are transmitted over non-IP facilities. Furthering the IP transition is thus critical to NTCA members eager to leverage

[40] NTCA has long advocated, at the behest of its members, for a thoughtfully tailored approach to promoting and sustaining the ongoing IP transition. *See* NTCA Petition for Rulemaking (fil. Nov. 19, 2012) (seeking to initiate a "smart regulation" approach to the IP transition).

[41] *NTCA Broadband/Internet Availability Survey Report*, Dec. 2024, at pp. 1, 30 (available at https://www.ntca.org/sites/default/files/documents/2025-01/2024-broadband-internetavailability-report.pdf).

existing and new investments in innovative technologies to better serve their rural communities and protect subscribers.

Against this backdrop, NTCA urges the Commission to consider what measures it can take to clarify or eliminate rules that serve as impediments to an IP transition; the pending proceeding examining "deregulatory options to encourage providers to build, maintain, and upgrade their networks"[42] is promising, and should highlight where existing regulatory requirements limit providers' ability to move away from non-IP facilities. Where any existing Commission rules impede or discourage a transition from non-IP facilities within their networks – and where consumers relying on service offered over these networks today can be assured of continued service at the same rates, terms, or conditions of service – unnecessary impediments to technology transitions should be set aside.

For RLECs, as NTCA recently highlighted,[43] certain regulatory frameworks remain tied to non-IP constructs and in turn can serve as a disincentive or outright barrier to the kinds of technology transitions that can promote widespread caller-ID authentication. For example:

- RLECs wishing to move to "hosted" or cloud-based VoIP services should be free to do so without this being viewed as inconsistent with their eligible telecommunications carrier obligations or state requirements with respect to the offering of voice services, or triggering discontinuance procedures. The Commission should clarify that if a provider undertakes such a transition and does so without changing the rates, terms, or conditions of service for the customer, such a technological migration would not be perceived as a discontinuance of existing services or trigger other regulatory changes; instead, this should be viewed merely as a transition of underlying network technology, analogous to a provider undertaking a switch migration.

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[42] *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment Fifth Report and Order*, DRAFT Fourth Further Notice of Proposed Rulemaking, and Orders on Reconsideration – WC Docket No. 17-84, available at: https://docs.fcc.gov/public/attachments/DOC-412690A1.pdf. The Commission is scheduled to vote on approving this rulemaking on July 24, 2025.

[43] *Ex parte* letter, NTCA–The Rural Broadband Association, WC Docket Nos. 17-97, 13-5, 10-90, 04-36 (fil. Jul. 2, 2025).

- The Commission should also clarify that providers of voice telephony need not maintain a physical switch in their respective geographic service areas for the delivery of such services.

- The Commission should also clarify that the offering of hosted or cloud-based voice telephony services can satisfy the requirement that eligible telecommunications carriers own "physical components of the telecommunications network that are used in the transmission or routing of the services designated for [universal service support],"[44] as long as the carrier in question owns the distribution plant by which calls are routed to and from customers.

Again, the response to the pending technology transitions NPRM offers an opportunity for the Commission to identify where existing rules may stand in the way of non-IP facilities being removed from the nationwide voice network. Removal of these can promote widespread caller ID authentication and alleviate any concerns with respect to the cost of implementing non-IP authentication solutions.

2. The Commission should facilitate migration from non-IP interconnection arrangements – and pair the trigger for implementation of non-IP authentication requirements with an interconnection backstop.

As noted above, most non-local voice traffic delivered to and from RLEC service areas today is routed through upstream TDM (or non-IP) tandems owned and operated by other national and regional providers. These non-IP facilities are often a barrier to RLECs' and other operators' successful use of STIR/SHAKEN. NTCA members have long indicated that requests made to tandem operators to interconnect in IP for voice traffic are rebuffed.

Alternatives to this interconnection model are likely to emerge, such as direct physical connections between carriers, virtual use of SIP connectivity, or procurement of third-party routing services such as those offered by hosted VoIP platforms. That said, absent Commission

[44] *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 29 FCC Rcd 8776, 8847 (1997), ¶ 128.

attention to "what happens on the other side" of this transition, the affordability of voice service in rural areas will be undermined. Under the current model of voice interconnection, financial responsibility is apportioned in such a way between RLECs and other operators as to keep rates in rural areas affordable, as the former are generally not financially responsible today for delivering most non-local voice traffic to or from distant points far outside their networks.[45] Yet as the industry transitions to alterative IP-based interconnection arrangements, RLECs will be required to arrange for new routing methods to achieve such interconnection, and the mere fact that such interconnection will take place "in IP" will not magically erase all of the costs of implementing and operating those numerous connections. If anything, these could be far more costly, effectively transferring the financial responsibility of interconnection to smaller and rural providers (and ultimately the customers they serve); to the extent, for example, that RLECs are compelled to interconnect in IP with multiple larger national operators at different locations all around the country or to otherwise assume transport and routing costs they do not today to implement new interconnection models, the current cost apportionment will be turned almost directly on its head.

The consequences of this shift in cost responsibility could be profound for rural communities – and for the Commission's statutory mandate to preserve and advance universal service. If these new costs are passed on to smaller and rural operators and then to the customers they serve, competition and the mission of universal service could be jeopardized; these

[45] As a 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.

providers cannot look to their smaller rural customer bases to bear such costs without the prospect of making services less affordable or even unaffordable altogether. Even if IP networking may be more efficient on the whole, foisting the costs of a transition to IP interconnection largely onto smaller and rural providers would hardly be efficient or effective (or lawful). Instead, it would represent a transfer of the costs of interconnection from a shared responsibility today between operators of all sizes to a system where the costs "flow downhill" to smaller and rural operators and the customers they serve.

The Commission can and should address these concerns via reasonable, clear, and simple "rules of the road" – a light-touch framework that would help facilitate IP interconnection transitions (thereby also facilitating more widespread successful authentication of calls to and from rural areas). Specifically, the Commission should adopt a simple "default" apportionment of *costs* among operators, stating that while calls may route through a variety of IP-enabled interconnects (or to multiple points) to reach their destination, an 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. These will give all providers a clear sense of relative financial responsibility associated with such transitions.

In suggesting this kind of light-touch backstop, NTCA is not seeking to perpetuate TDM interconnection constructs, but rather is seeking only to maintain the existing relative financial apportionment of interconnection costs so that a transition to IP interconnection will not, in defiance of universal service objectives, result in the transfer of costs for such connectivity from larger operators to smaller providers serving high-cost rural areas. NTCA members have invested in the IP transition and in cutting edge networks that deliver the services their rural communities demand; these services include IP-enabled caller ID authentication that protects

subscribers from scammers and ensures their calls outside rural areas are viewed as trustworthy. Ensuring these work as intended should not come at the price of new interconnection-related costs that undermine the affordability of voice service.

Finally, NTCA recommends that the Commission pair the adoption of such a light-touch backstop with a mandate to implement non-IP authentication capabilities, so that providers then have a meaningful choice. Many providers such as those in NTCA's membership would greatly prefer to migrate to IP interconnections given the substantial investment in their own IP networks, but cannot do so for the reasons described above. But if greater regulatory certainty and a clearer pathway to IP interconnection can be defined by the Commission through "rules of the road" such as those described above, the relative costs of choosing to migrate to IP as compared to implementing non-IP authentication solutions become far more transparent. Thus, NTCA suggests that the Commission mandate implementation of non-IP authentication standards as noted herein, but that it schedule such a mandate for a reasonable period of time (*e.g.*, 18 or 24 months) after the effective date of new IP interconnection rules.

III. CONCLUSION

For the reasons discussed above, the Commission should repeal the continuing extension from call authentication obligations for providers relying on non-IP networks require that such providers to upgrade their networks to IP or implement one or more non-IP caller ID authentication solutions.

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