

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

In the Matter of)	
)	
Call Authentication Trust Anchor)	WC Docket No. 17-97
)	
Implementation of TRACED Act Section 6(a) —)	WC Docket No. 20-67
Knowledge of Customers by Entities with Access)	
to Numbering Resources)	
)	

**Comments of
WTA – Advocates for Rural Broadband**

WTA – Advocates for Rural Broadband (“WTA”) files these Comments in response to the Report and Order and Further Notice of Proposed Rulemaking (“Further Notice”) adopted by the Commission on March 31, 2020.¹ In its Further Notice, the Commission seeks to implement the TRACED Act² by considering, among other things, an extended implementation for small rural voice providers, required implementation for intermediary providers, and an extension for undue hardship as a result of an inability to access a session initiation protocol (“SIP”) interconnection.

WTA represents more than 340 small rural local exchange carriers (“RLECs”) that offer local voice, broadband, and video-related services to customers in some of the hardest to serve areas in our country and are providers of last resort in their communities. In order to offer reliable, affordable voice service and high-speed broadband, WTA members are recipients of

¹ *Report and Order and Further Notice of Proposed Rulemaking, Call Authentication Trust*
² *Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act, Pub. L. No. 116-105 (2019) (TRACED Act).*

Universal Service funding via the High Cost Fund, which allows them to offer services in areas where there would otherwise not be a business case to do so.

Earlier in this proceeding, WTA noted that the small customer bases and limited financial resources of RLECs make it very difficult for them to undertake expensive projects such as upgrades to an all-IP voice network and the adoption of STIR/SHAKEN at a time when they are already stretched to the limits by the need to extend and upgrade their broadband networks. WTA also stated that its members do not have the research and development resources to produce their own hardware and software, and must instead rely upon the vendor community for IP, STIR/SHAKEN, and other solutions. Further, and most importantly, WTA highlighted the fact that virtually all RLECs lack access to interconnection arrangements that can handle SIP traffic and the STIR/SHAKEN solution.³

Almost a year has passed since WTA's initial comments, and little has changed as far as the ability of RLECs to adopt STIR/SHAKEN. Most notably, RLECs are still unable to implement STIR/SHAKEN until larger providers make the necessary upgrades to their existing tandem switches that will allow RLECs to transmit their calls in SIP format. WTA thus supports the Commission finding that the lack of an IP interconnection point represents an undue hardship that warrants an implementation extension. WTA also encourages the Commission to adopt new "rules of the road" for IP interconnection that that will advance voice telephony in rural America.

While RLECs wait for the ability to interconnect affordably and adopt STIR/SHAKEN, it is important that they play a role in call authentication. WTA thus supports the Commission's interpretation of the TRACED Act that allows for the adoption of alternative call authentication methodologies on TDM networks. Most notably, WTA disagrees with the Commission's

³ Comments of WTA - Advocates for Rural Broadband, CG Docket No. 17-59, WC Docket No. 17-97, filed on July 24, 2019.

assessment that out-of-band STIR is still in its infancy since it is being successfully deployed by a small, but growing, contingent of RLECs in a cost-efficient manner.

THE COMMISSION SHOULD GRANT EXTENSIONS TO PROVIDERS WHO CANNOT INTERCONNECT IN IP AT EXISTING MEET POINTS

In its Further Notice, the Commission seeks comment on whether it should provide an implementation extension to “voice service providers that will not be able to carry authentication information to the next intermediate or voice service provider in the call path due to an inability to interconnect in IP.”⁴ This is in response to the record developed to the 2019 Further Notice where WTA and others voiced the reality that most, if not all, RLECs that have deployed IP capable infrastructure still send traffic in TDM format rather than SIP because they must interconnect with a legacy TDM tandem switch operated by a Regional Bell Operating Company (“RBOC”) or another large price cap carrier.⁵ As the Commission notes, for STIR/SHAKEN to function, there must be a SIP connection from end-to-end of a call with no TDM technology in between.⁶ Hence, the lack of an IP interconnection arrangement constitutes a showstopper in terms of being able to implement the STIR/SHAKEN solution.

For nearly all RLECs, using existing tandem switches (potentially a single tandem switch for many RLECs) constitutes the only feasible option for connecting their voice networks to the rest of the world. However, RLECs report that in conversations with tandem switch providers, the providers have made known their unwillingness to upgrade their switches and instead have offered SIP interconnections at distant locations outside the RLEC service areas at an exorbitant

⁴ Comments of NTCA – The Rural Broadband Association, CG Docket No. 17-59, WC Docket No. 17-97, filed on July 24, 2020, at 7; Comments of Telnyx, LLC Comments, CG Docket No. 17-59, WC Docket No. 17-97, filed July 24, 2019, at 1-2; WTA Comments at 3-4.

⁵ WTA Comments at 3-4.

⁶ Further Notice at FN 135.

cost to be borne solely by the RLEC.⁷ Given that RLECs have minimal legal rights and bargaining power in IP interconnection negotiations as well as a set, limited budget, these interconnection issues pose serious threats not only to the ability of many RLECs to implement STIR/SHAKEN but also to their basic ability to offer affordable voice service to their customers in line with the Commission’s Universal Service goals.

Hence, in order to attain the widespread implementation of STIR/SHAKEN by RLECs, the Commission needs to adopt rules that enable RLECs to obtain efficient and affordable IP interconnection with larger providers. WTA supports NTCA’s call for new “rules of the road” governing interconnection and agrees that a “narrow, simple, and straightforward ‘hold harmless’ provision for IP interconnection limited to agreements for the exchange of voice traffic between RLECs and other operators” would greatly advance voice telephony in rural America.⁸

Until then, the Commission should consider it an undue hardship and grant an implementation extension if the tandem provider refuses or otherwise fails to interconnect in IP with an RLEC at an existing meet point. At the very least, it should be an undue hardship if tandem providers and other large carriers require RLECs to deliver or pay for the delivery of originating voice traffic to distant points outside the boundaries of their existing service territories. Imposing onerous IP interconnection requirements upon RLECs will threaten the economies of VoIP service and preclude them from offering affordable VoIP services to their rural customers that are reasonably comparable to those available in urban areas.

⁷ Ex parte Letter of New Lisbon Telephone, WC Docket Nos. 17-97, 20-67, filed on April 30, 2020; “One of the tandem providers will provide us with a tandem SIP interconnect in Indianapolis, but the estimated cost of this circuit is \$2,000 per month, plus additional upfront costs for cross connects, equipment, etc.”

⁸ Reply Comments of WTA – Advocates for Rural Broadband, CG Docket No. 17-59, WC Docket No. 17-97, filed on August 23, 2019; “Such a rule would be “similar to the ‘rural transport rule’ adopted in 2011,” which held that RLECs had no obligation to carry originating non-access traffic beyond their own service territories;” Comments of NTCA at 6.

SMALL PROVIDERS WILL BENEFIT FROM A STIR/SHAKEN IMPLEMENTATION EXTENSION AS IT WILL ALLOW TIME FOR VENDOR SOLUTIONS TO DEVELOP, LARGER CARRIERS TO MAKE NECESSARY UPGRADES, AND ALTERNATIVE METHODOLOGIES TO BE CONSIDERED

In its Further Notice, the Commission proposes an implementation extension for small providers pursuant to the TRACED Act that gives them until June 30, 2022 to adopt the STIR/SHAKEN solution on the IP portions of their networks. WTA supports this extension as it gives more time for providers to consider which solutions fit best for their individual networks and allow time for the subsequent upgrades to hardware and software. As noted before, RLECs are dependent on the vendor community for many of their technical solutions, and it may be some time before vendors begin to offer solutions that are suitable for RLECs. It is likely that the adoption of STIR/SHAKEN by larger providers will greatly increase the number of solutions available – especially if larger providers can remove the biggest hurdle of RLEC STIR/SHAKEN adoption by upgrading their existing tandem switches and allowing for a more affordable transition. Further, RLECS are often reliant on multiple vendors for different parts of their network. For example, one vendor may provide the softswitch and other central office equipment that then connects to another vendor’s hardware outside the home. In order for STIR/SHAKEN to be adopted, these vendors must agree on how they will exchange STIR/SHAKEN certificates so the call is properly authenticated. According to many WTA members, vendors are currently not on the same page as to how they will implement STIR/SHAKEN.

The additional implementation time will also allow RLECs more time to budget and prepare for the financial commitment that will be required to pay for a STIR/SHAKEN upgrade. WTA members have received quotes from vendors for first-year STIR/SHAKEN

implementation costs that average between \$50,000 and \$100,000 depending on the size of the network. In many of these cases, WTA members are told they need to upgrade a softswitch that was just recently installed. One member noted that it was told it would need to replace a softswitch it installed only two years prior. Members also report that they will have to pay new reoccurring charges of about \$40,000 annually for licensing. These costs are significant for a product that cannot be marketed and sold like other network investments can be (e.g., increased broadband speeds). Finally, these costs assume that the RLEC has found an affordable IP interconnection, which is something currently unavailable to them. It makes no sense for a carriers to pay for these upgrade costs if only locals calls can be authenticated.

While these upfront expenses may seem insignificant to larger providers, they could cause a budget shortage for small providers who have a limited, set multi-year budget that is already dedicated to new deployments, staff, etc. The ability to factor these costs in over several years will reduce the potential interruption and ensure that other offerings from an RLEC are not degraded.

WTA's members are committed to implementing STIR/SHAKEN with other larger carriers once the interconnection hurdle is cleared. The ability to affordably access IP interconnection will undoubtedly spur the upgrades of any remaining TDM portions in RLEC networks. In the meantime, WTA supports the development of alternative call authentication methods that can be run on TDM and can be used as a "bridge" until full STIR/SHAKEN adoption is possible. Most notably, out-of-band STIR has been successfully deployed by several RLECs who state that the solution has worked for them - contradicting the Commission's statement in its Further Notice that out-of-band STIR is "in its infancy and is not readily

available to be implemented.”⁹ Rather, out-of-band STIR was created in 2013, has been tested, and is now in the deployment stage. In the end, out-of-band STIR is largely the same as full STIR/SHAKEN as it allows tokens to be exchanged for call authentication. Based upon this success, the Commission should encourage its development as its continued success may provide a viable, affordable alternative to carriers who wish to participate in STIR/SHAKEN but are technically unable to.

CONCLUSION

WTA advises the Commission that interconnection remains a serious barrier for RLECs wishing to adopt the STIR/SHAKEN solution. In order to advance IP voice telephony in rural America, the Commission should set “rules of the road” that preserve existing meet points for interconnection and protect RLECs from having to interconnect at distant locations. At the very least, the Commission should find that an RLEC’s inability to interconnect in IP represents an undue hardship that warrants an extension.

An extended implementation period for RLECs to implement STIR/SHAKEN on the IP portions of their network will allow additional time for them to choose and test vendor solutions and will hopefully allow time for larger carriers to make upgrades at interconnection points. However, considering the cost of transitioning to full STIR/SHAKEN as well as the amount of TDM that remains in our nation’s telephony network, the Commission should encourage the research and deployment of alternative call authentication methodologies, including out-of-band STIR, which has already begun to be deployed in some rural networks as a bridge to STIR/SHAKEN.

⁹ Further Notice at ¶ 88.

Respectfully submitted,

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