

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

In the Matter of)	
Call Authentication Trust Anchor)	WC Docket 17-97
)	
Implementation of TRACED Act Section 6(a))	
Knowledge of Customers by Entities with)	WC Docket 20-67
Access to Numbering Resources)	
)	

**COMMENTS OF
USTELECOM – THE BROADBAND ASSOCIATION**

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May 15, 2020

EXECUTIVE SUMMARY

USTelecom supports the Commission's requirement for all originating and terminating voice service providers to implement STIR/SHAKEN in the IP portions of their networks by June 30, 2021. Given the rapid proliferation and ever-changing nature of illegal robocalls, the Commission has wisely provided flexibility for voice service providers to develop industry-led, standards-based solutions. USTelecom continues to work cooperatively with a broad range of stakeholders on this issue in order to find practical, workable solutions to widespread implementation of caller ID authentication and other tools to prevent illegal robocalls.

There is no single solution to address the challenge, and no solution will be immediately and simultaneously available for all calls, including STIR/SHAKEN. Therefore, the most important step the Commission can take at this time is to require all voice service providers to certify that they have implemented an "appropriate robocall mitigation program" governing all traffic that the voice service provider originates on its network and does not sign using the STIR/SHAKEN authentication protocol – whether TDM traffic or IP traffic. The Commission should require every provider of voice service to register with the Commission and certify that all of its traffic is either (i) signed with STIR/SHAKEN or (ii) subject to a robocall mitigation program. There are various ways a voice service provider can avoid enabling calling parties to originate illegal robocallers, so the certification that the Commission requires service providers to make about their robocall mitigation programs should – in the first instance – be non-prescriptive.

The TRACED Act acknowledges the Commission should leverage the Registered Traceback Consortium, which the Commission is in the process of establishing, as a tool in assessing a voice service provider's compliance with the implementation of a robocall mitigation program. The Registered Traceback Consortium can provide critical information to enable the Commission to evaluate whether a provider has not implemented an effective robocall mitigation program. Having a robocall mitigation certification process in place, along with information available from the Registered Traceback Consortium, should significantly reduce illegal robocalls and ensure that providers unable to implement STIR/SHAKEN will not originate illegal robocalls.

To achieve successful widespread implementation of STIR/SHAKEN, the Commission should require intermediate providers to pass unaltered attestations they receive to the subsequent intermediate or terminating voice service provider in the call path, but intermediate providers should not be subject to any signing mandate. The Commission should not require intermediate providers to authenticate unauthenticated calls. The use of the C-level attestations by intermediate providers should be permitted but not obligatory. While C-level attestations in certain contexts may have some usefulness in the future depending on how industry best practices develop, the Commission should not encourage them and certainly should not mandate their use.

USTelecom members are committed to implementing STIR/SHAKEN on the IP portions of their network for which industry standards have been fully vetted and adopted. For some

traffic, Congress recognized that there may be burdens and barriers for such providers that justify extensions of implementation deadlines. USTelecom supports the Commission's use of authority to grant a delay of compliance if there is a finding of undue hardship, as many providers may have corner cases in which portions of its network will not be able to deliver authenticated and signed traffic.

USTelecom supports an extension for a reasonable time as necessary to address burdens and barriers to implementation and undue hardship for voice service providers that use TDM network technology and to providers that materially rely on non-IP technology. In addition, Congress directs the Commission to provide a mandatory extension for providers implementing caller ID authentication framework on TDM/non-IP networks, which is not just warranted due to undue hardship. Small, rural, and regional providers may also require implementation extensions. To the extent the Commission grants a blanket one-year undue hardship extension for these providers, such an extension should only be available for those that register and certify to the Commission that they have a robocall mitigation program in place. Absent such a requirement, USTelecom would only support the one-year implementation extension due to undue hardship for small voice providers, on a case-by-case basis.

Extensions of the STIR/SHAKEN implementation deadline should also be provided for enterprise calls and for complex cases for which industry standards are not yet developed. For such complex use cases where industry standards and/or best practices are not yet in place, the Commission should provide industry the necessary flexibility to establish practical solutions.

The Commission should not mandate the use of non-standards-based STIR/SHAKEN frameworks such as "Out-of-band" STIR. As the Commission moves forward with the implementation of STIR/SHAKEN, it should be mindful of the need to incentivize full standards-based solutions that have been sufficiently explored, vetted and agreed to by industry, particularly for calls on legacy networks. The Commission should not adopt workaround solutions that may have the unintended effect of discouraging the adoption of the full STIR/SHAKEN standard or that may introduce unnecessary cost, complexity and risk for callers or voice service providers.

Finally, the Commission should not require applicants for numbering resources to provide a certification that the applicant "knows your customers" because it is unnecessary and unrelated to access of numbering resources. Instead, if the Commission adopts the requirement for a robocall mitigation program, the program itself will include a meaningful set of "know your customer" obligations that appropriately apply to any voice service provider that originates traffic.

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**COMMENTS OF
USTELECOM – THE BROADBAND ASSOCIATION**

USTelecom—The Broadband Association (USTelecom)¹ submits these comments in response to the Federal Communications Commission’s (Commission) Further Notice of Proposed Rulemaking (Further Notice)² to provide insight on additional measures to combat illegal spoofing, including further implementation of the TRACED Act.³

I. INTRODUCTION

USTelecom and its members are strongly committed to taking a variety of steps to shield consumers from illegal robocalls and prevent abuse of the telephone network. These steps include deploying powerful call labeling and blocking tools, implementing the STIR/SHAKEN authentication framework on Internet Protocol (IP) networks, identifying the source of illegal

¹ USTelecom is the premier trade association representing service providers and suppliers for the telecommunications industry. USTelecom members provide a full array of services, including broadband, voice, data, and video over wireline and wireless networks. Its diverse member base ranges from large publicly traded communications corporations to small companies and cooperatives – all providing advanced communications service to both urban and rural markets.

² *Call Authentication Trust Anchor*, WC Docket No. 17-97; *Implementation of TRACED Act Section 6(a) — Knowledge of Customers by Entities with Access to Numbering Resources*, WC Docket No. 20-67, Further Notice of Proposed Rulemaking, (Mar. 31, 2020) (*STIR/SHAKEN Mandate FNPRM*).

³ Pallone-Thune TRACED Act, S. 151, 116th Cong. (2019) (“TRACED Act”).

robocalls through USTelecom’s Industry Traceback Group (ITG),⁴ and cooperating with federal and state enforcement agencies against illegal callers. Each of these activities are essential to eliminate the scourge of illegal robocalls and restore trust in the telephone network. While the Commission must be mindful that barriers to full implementation may arise for some voice service providers, USTelecom supports the Commission’s order requiring all originating and terminating voice service providers to implement STIR/SHAKEN in the IP portions of their networks by June 30, 2021.⁵ Widespread deployment of STIR/SHAKEN will reduce the effectiveness of illegal spoofing and will assist voice service provider efforts to identify calls with illegally spoofed caller ID information before those calls reach their customers.

USTelecom appreciates the Commission’s recognition to date of the value of providing flexibility for industry to develop industry-led, standards-based solutions. A continued reliance on flexibility and industry-led, standards-based solutions is necessary as the Commission contemplates expanding the STIR/SHAKEN implementation mandate to cover intermediate voice service providers; extending the implementation deadline for various voice service providers due to undue hardship pursuant to the TRACED Act; adopting requirements to promote caller ID authentication on voice networks that do not rely on IP technology; applying a robust robocall mitigation program, and implementing other aspects of the TRACED Act.

II. REQUIREMENT TO IMPLEMENT A ROBUST ROBOCALL MITIGATION PROGRAM AND TO REGISTER THE STATUS OF ITS COMPLIANCE WITH SUCH A REQUIREMENT AND STIR/SHAKEN IMPLEMENTATION FOR ALL VOICE SERVICE PROVIDERS

⁴ See The USTelecom Industry Traceback Group (ITG), What Is the Industry Traceback Group, available at <https://www.ustelecom.org/the-ustelecom-industry-traceback-group-itg/> (last visited May 6, 2020).

⁵ *Call Authentication Trust Anchor*, WC Docket No. 17-97; *Implementation of TRACED Act Section 6(a) — Knowledge of Customers by Entities with Access to Numbering Resources*, WC Docket No. 20-67, Further Notice of Proposed Rulemaking, (Mar. 31, 2020) (*STIR/SHAKEN Mandate Report and Order*).

It is essential that the Commission require all voice service providers to certify that they have implemented an “appropriate robocall mitigation program”⁶ on all traffic that the service provider originates on its network and does not sign using the STIR/SHAKEN protocol. The scope of the robocall mitigation program, registration requirements, definitions and obligations of required service providers, and elements of certification are explained below in detail.⁷ In addition to the parameters of the proposed robocall mitigation program, USTelecom recommends enforcement action by the Commission’s Enforcement Bureau and heightened “know your customer” procedures for service providers with presumptive deficient robocall mitigation programs based on evidence of tracebacks. Moreover, consistent with the intent of the TRACED Act, the Commission should rely on the Registered Traceback Consortium to trace back illegal robocalls to identify the source of illegal robocalls.

A. Robocall Mitigation Program Definitions, Registry and Certification

The core objectives of this proceeding and the TRACED Act are to restore trust in the telephone network. Implementation of STIR/SHAKEN is an important step towards restoring that trust, but such implementation will take time, particularly for non-IP traffic. Thus, as part of the obligation to implement STIR/SHAKEN requirements, the Commission should focus on the importance of ensuring that for all traffic, IP and non-IP, voice service providers are taking appropriate steps necessary to ensure illegal calls are not originating on its network. Such objectives should be more than a mere goal, it should be in the form of a specific Commission requirement. The Commission should require all voice service providers to certify that they have implemented an “appropriate robocall mitigation program” governing all traffic that the voice service provider originates on its network and does not sign using the STIR/SHAKEN

⁶ TRACED Act § 4(b)(5)(C).

⁷ *STIR/SHAKEN Mandate FNPRM* at ¶ 92.

authentication protocol – whether TDM traffic or IP traffic, for which the voice service provider qualifies for an exemption or extension, including traffic originating from enterprise customers.⁸ While USTelecom proposes⁹ the following robocall mitigation program to comply with the requirement set forth in Section 4(b)(5)(C) of the TRACED Act,¹⁰ such a requirement should be adopted in advance of the TRACED Act’s implementation deadlines or any extensions applicable thereto.

1. *Every Entity in the Call Path Should Be Required to Certify Itself as Either an Originating, Intermediate, or Terminating Voice Service Provider*

As USTelecom has proposed,¹¹ the Commission should issue rules that clearly identify the specific obligations applicable to various types of voice service providers. Perhaps the Commission’s most important policy imperative, if it is to achieve its goals of restoring trust in voice calls, is to eliminate any ambiguity about the obligations applicable to every voice service provider. To that end, every entity in the call path must be part of the solution, and no entity in the call path should be permitted to register as itself as “none of the above” or “other” because any gaps in the regulatory regime would permit unregistered entities to ignore the STIR/SHAKEN and call mitigation obligations that are necessary to restore consumer trust in voice calls.

a. Originating Voice Service Providers.

⁸ *STIR/SHAKEN Mandate FNPRM* at ¶ 28.

⁹ *Id.* at ¶ 92.

¹⁰ Consistent with Section 4(b)(5)(C), a voice service provider that receives an extension of the TRACED Act’s STIR/SHAKEN implementation deadlines should be required to implement an “appropriate robocall mitigation” program for traffic covered by such extension.

¹¹ See Letter from Farhan Chughtai, USTelecom, to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket No. 17-59; WC Docket No. 17-97 (filed Mar. 06, 2020).

Definition. The Commission should define “originating voice service provider” in a way that leverages the definition it created in the Rural Call Completion context,¹² but that makes clear that foreign service providers are required to register if they intend to make calls to U.S. numbers using U.S. numbers. Specifically, USTelecom proposes the following definition:

An Originating Voice Service Provider is any provider which offers end users the capability to place calls to the public switched telephone network. An Originating Voice Service provider may be a local exchange carrier as defined in §64.4001(e), an interexchange carrier as defined in §64.4001(d), a provider of commercial mobile radio service as defined in §20.3 of this chapter, a provider of interconnected voice over Internet Protocol (VoIP) service as defined in 47 U.S.C. 153(25), or a provider of non-interconnected VoIP service as defined in 47 U.S.C. 153(36).

Obligations. Originating Voice Providers that have implemented STIR/SHAKEN should be required to sign calls with STIR/SHAKEN, and should be required to certify in the registry that all of their traffic is either (i) signed with STIR/SHAKEN or (ii) not signed with STIR/SHAKEN, but subject to a robocall mitigation program.

b. Intermediate Voice Service Providers

Definition. As proposed in the Further Notice,¹³ an Intermediate Voice Service Provider should be defined as in Section 64.1600(i), but with the following clarification: No service provider qualifies as an intermediate service provider where it accepts traffic from an entity that is not a registered service provider.

Obligations. Intermediate Voice Service Providers should have two important but easily-implemented obligations. First, Intermediate Voice Service Providers should be required to pass

¹² 47 CFR § 64.2101.

¹³ *STIR/SHAKEN Mandate FNPRM* at ¶ 67.

STIR/SHAKEN identity headers (if present) unaltered, except where security, network capacity, or network resilience considerations require suppressing headers in order to ensure call completion and protect consumers and the network. Second, Intermediate Voice Service Providers should be prohibited from accepting any traffic from an upstream service provider if that upstream service provider (whether an Originating Voice Service Provider or an Intermediate Voice Service Provider) is not registered and in good standing in the registry.¹⁴ If Intermediate Voice Service Providers were permitted to accept traffic from entities not registered and in good standing, it would defeat the purpose of the registration and certification regime by introducing entities into the call path that are not subject to Commission oversight and enforcement of its certification provisions.

c. Terminating Voice Service Providers

Definition. A Terminating Voice Service Provider should be defined as any voice provider that terminates calls to end user customers.

Obligations. A Terminating Voice Service Provider should (i) be required to validate calls in conformance with Section 64.6301(a)(3) and (ii) prohibited from accepting any incoming traffic from an upstream service provider if that upstream service provider (whether an Originating Voice Service Provider or an Intermediate Voice Service Provider) is not registered and in good standing in the registry.¹⁵

B. Scope of Robocall Mitigation Obligations, Registration Requirements, and Obligations for Wholesale Providers

¹⁴ As discussed in detail in Section II below, Intermediate Voice Service Providers should be permitted to use the C-level attestation when receiving unsigned traffic, but should not be required to do so.

¹⁵ As with Intermediate Voice Service Providers, allowing Terminating Voice Service Providers to accept traffic from entities not registered and in good standing would defeat the purpose of the registration and certification regime by introducing entities into the call path that are not subject to Commission oversight and enforcement.

The Commission should impose this robocall mitigation requirement broadly on any service provider providing any “voice service” (as that term is defined in Section 4(a)(2) of the Act)¹⁶ to any end user customer. An end user customer is any customer that is not providing a “voice service” to any other customer. The Commission should require every provider of voice service to register with the Commission and certify that all of its traffic is either (i) signed with STIR/SHAKEN or (ii) subject to a robocall mitigation program.¹⁷

The Commission should require every Form 499 filer to make this certification. The Commission should then, establish a public database identifying every Form 499 filer that has issued its certification, along with appropriate rules requiring transit service providers to confirm that their customers have such certifications on file and are in good standing. Providers of wholesale voice services should not be required to provide the certification described above, provided that they accept traffic only from service providers that are registered with the Commission and have provided the certification described above.

C. Elements of a Robocall Mitigation Program

There are various ways a service provider can avoid serving illegal robocallers, so the certification that the Commission requires service providers to make about their robocall mitigation programs should – in the first instance – be non-prescriptive. The purpose of the certification is to ensure that the service provider is committed to adhering to the appropriate practices, based on the nature of its traffic and its knowledge of its customer base, such that the likelihood that it will be identified as the source of illegal robocalls is low.

Rather than require a provider to certify specific steps it has taken to ensure that illegal calls are not being generated on its network, the Commission should require the service provider

¹⁶ TRACED Act § 4(a)(2) (defining the term “voice service”).

¹⁷ *STIR/SHAKEN Mandate FNPRM* at ¶ 92.

to implement a robocall mitigation program. Below is a non-exhaustive list of the types of steps that a service provider could take as part of a robocall mitigation program such that it takes reasonable steps to avoid originating illegal robocalls.

- A service provider whose end users are incapable of originating large volumes of calls should be permitted to certify that they have an appropriate program because the risk that they will become part of illegal robocallers' attack vector is low.¹⁸
- A service provider takes reasonable steps to confirm the identity of new commercial VoIP customers by collecting information such as physical business location, contact person(s), state or country of incorporation, federal tax ID, and the general nature of the customer's business. In all cases, collect sufficient information so that the voice service provider has the ability to contact its customer.
- A service provider analyzes high-volume voice network traffic to identify and monitor patterns consistent with robocall campaigns.
- A service provider analyzes traffic for patterns indicative of fraudulent calls – for example, identifying short duration calls with low completion rates.
- If a service provider detects a pattern consistent with illegal robocalls, or if a service provider otherwise has reason to suspect illegal robocalling or illegal spoofing is taking place over its network, it seeks to identify the party that is using its network to originate, route, or terminate these calls and takes appropriate action.

¹⁸ For example, consideration should be given to calls originating from legacy rural and remote switches serving small villages in the Alaska bush, many of which lack even SS7 signaling capability and thus also lack the ability to originate large volumes of calls necessary for illegal robocalling campaigns.

- Taking appropriate action may include, but is not limited to, initiating a traceback investigation, verifying that the originating commercial customer owns or is authorized to use the Caller ID number that is being used, terminating or suspending the party's ability to originate, route, or terminate calls on its network, or notifying law enforcement authorities.
- A service provider dedicates sufficient resources to provide prompt and complete responses to traceback requests from law enforcement and from the Registered Traceback Consortium.¹⁹

Importantly, imposing such a robocall mitigation requirement on all voice service providers (not just TDM) with traffic not signed via STIR/SHAKEN, will not only provide benefits to preventing illegal spoofing, but will also prevent illegal calls made by parties using their own numbers and will provide a mechanism to mitigate bad robocalls that do get through.

D. Enforcement Action and Heightened “Know Your Customer” Procedures for Service Providers Who Ineffectively Mitigate Illegal Robocalls

USTelecom recommends that the Commission's Enforcement Bureau, in conjunction with the Registered Traceback Consortium, establish a data-driven methodology for identifying service providers that are frequently the origination source of illegal robocalls so that they can be presumed to be aiding or facilitating their customers' origination of illegal traffic. For example, if a service provider is informed multiple times about a customer's suspected illegal traffic, yet the same illegal campaign from the same customer continues to trigger illegal robocall campaign tracebacks that identify the same originating service provider, the Enforcement Bureau could conclude that the service provider's robocall mitigation program is presumptively deficient.

¹⁹ For example, as defined by the publicly available ITG Policies and Procedures; *See e.g.* The USTelecom Industry Traceback Group (ITG), ITG Policies and Procedures, *available at* <https://www.ustelecom.org/wp-content/uploads/2020/01/USTelecom-ITG-Policies-and-Procedures-Jan2020.pdf> (last visited May 6, 2020).

Similarly, a service provider's robocall mitigation program should be deemed presumptively deficient if that service provider is found to be the origination point for multiple ongoing illegal robocall campaigns during a particular period of time.

A finding of a presumptively deficient robocall mitigation program could trigger at least two potential consequences. First, if the Enforcement Bureau's investigation indicates that the service provider had substantial knowledge of illegal activity and consistently ignored it, the Enforcement Bureau should also de-list the provider from the registry of voice service providers (discussed above), so that downstream service providers are prohibited from accepting its traffic. The Enforcement Bureau could also consider whether to pursue an enforcement action against the offending carrier. Second, where sufficient evidence indicates that the service provider's robocall mitigation program is presumptively deficient, but there is no evidence of complicity in illegal activity, the Enforcement Bureau should place that service provider on probationary status. For service providers placed on probationary status, the Commission's rules could require them to provide details about their robocall mitigation practices; to monitor their end users' traffic patterns; to report to the Commission on the identities, locations, and traffic patterns (including illegal spoofing patterns, call durations, and un-answer rates) of their customers; and to describe the corrective action they have taken after being notified about customers' suspicious traffic. If the Commission finds that a substantial portion of a service provider's traffic continues to be illegal after a reasonable probationary period, it should prohibit that service provider from handling any voice traffic destined for U.S. consumers and should remove the service provider from the registry of service providers from which downstream service providers are permitted to accept its traffic until sufficient corrective actions have been taken to resolve the issues.

E. Consistent with the Directive of Congress, the Registered Traceback Consortium is the Mechanism on which the Commission Should Rely to Traceback Illegal Robocalls

The TRACED Act mandates the widespread implementation of STIR/SHAKEN, but also contemplates that some voice service providers facing barriers to implementation may be granted a delay of compliance.²⁰ To keep such providers from becoming new sources of unlawful robocalls, the TRACED Act requires the Commission to take action if the registered consortium “identifies a provider of voice service that is subject to a delay of compliance . . . as repeatedly originating large-scale unlawful robocall campaigns.”²¹ It is Congress’s intent that the Commission should leverage the Registered Traceback Consortium as a tool in assessing a provider’s compliance with the implementation of a robocall mitigation program. Once a provider has been identified by the Registered Traceback Consortium, the Commission is directed to “require such [a] provider to take action to ensure that such provider does not continue to originate such calls”²² and “make reasonable efforts to minimize the burden of any [such] robocall mitigation . . . , which may include prescribing certain specific robocall mitigation practices for providers of voice service that have repeatedly originated large-scale unlawful robocall campaigns.”²³ Thus, the Registered Traceback Consortium provides critical information to enable the Commission to evaluate a problematic provider’s effort to implement an effective robocall mitigation program.

USTelecom will soon be filing a letter of intent expressing its interest in serving as the Registered Traceback Consortium based on its experience managing the Industry Traceback Group. As a result of several years of industry coordination with the FCC, other federal agencies

²⁰ TRACED Act § 4(b)(5)(B).

²¹ TRACED Act § 4(b)(5)(C)(ii).

²² *Id.*

²³ *Id.*

and the states, the ITG has developed traceback techniques that have advanced substantially and are effectively and efficiently determining the sources of illegal calls. While tracing back calls to the gateway provider was indeed at one time viewed as an ancillary benefit of “C”-level attestations, the potential benefits of C-level attestation are diminished as a result of the success of the ITG’s ability to quickly identify the source of illegal robocalls.²⁴ Since its establishment in 2016, the ITG has dramatically improved the volume, speed and accuracy of its traceback process. In 2018, the ITG conducted approximately 20 tracebacks per month, but by 2019, the average number of tracebacks increased substantially to approximately 110 per month – representing over 1,000 individual traceback efforts over the course of a single year.²⁵ By April, 2020, the ITG has already conducted more than 800 tracebacks identifying the source of illegal robocall campaigns responsible for tens of millions of illegal calls. The time it now takes to trace back illegal robocalls to the source has been reduced from weeks to days – sometimes even hours. In 2019, the ITG increased engagement with non-ITG members and significantly decreased the amount of non-responsive service providers within the US by establishing improved outreach and coordination processes. In many cases, the ITG knows the provider responsible for originating suspicious traffic, the calling party, and where a robocall entered the U.S. network within hours.

An example of how ITG’s capability has evolved, and how it can support enforcement efforts, is last month’s actions by the Commission’ Enforcement Bureau and the Federal Trade Commission Bureau of Consumer Protection. The Commissions wrote to three gateway providers, identified by the ITG, that were facilitating COVID-19-related robocall scams

²⁴ *STIR/SHAKEN Mandate FNPRM* at ¶ 64.

²⁵ Press Release, USTelecom, USTelecom Industry Traceback Group 2019 Progress Report (Jan. 28, 2020), available at <https://www.ustelecom.org/wp-content/uploads/2020/01/ITG-2019-Progress-Report.pdf> (last visited May 6, 2020) at 5.

directing them not to allow illegal robocalls in to the United States.²⁶ The Commissions wrote to USTelecom expressing gratitude for the ITG’s “prompt response to identify and mitigate fraudulent robocalls that are taking advantage of the national health crisis related to the Novel Coronavirus Disease (COVID-19).”²⁷ The Commissions heralded the ITG’s efforts, stating, “the work of the USTelecom Industry Traceback Group is essential to combatting the deluge of unlawful robocalls and protecting consumers and is particularly vital in swiftly identifying scammers who attempt to defraud consumers during the COVID-19 disease outbreak.”²⁸ This is exactly the type of coordination between industry and government that Congress envisioned in the TRACED Act and that the Commission can build on going forward. This capability also calls into question the potential benefits of C-level attestation and requires a careful examination of whether the potential negative aspects of C-level attestation significantly outweigh its benefits.

III. INTERMEDIATE PROVIDERS SHOULD BE REQUIRED TO PASS (UNALTERED) ATTESTATIONS THAT THEY RECEIVE, BUT SHOULD NOT BE SUBJECT TO ANY SIGNING MANDATE.

To achieve successful widespread implementation of STIR/SHAKEN, the Commission should require Intermediate Providers²⁹ to pass any Identity header they receive to the

²⁶ See, Letter from Rosemary C. Harold, Chief, Enforcement Bureau, FCC, and Lois C. Greisman Associate Director, Division of Marketing Practices, FTC, to Chris Cordero, Connexum (Apr. 3, 2020), *available at* <https://docs.fcc.gov/public/attachments/DOC-363522A3.pdf> (last visited May 6, 2020); Letter from Rosemary C. Harold, Chief, Enforcement Bureau, FCC, and Lois C. Greisman Associate Director, Division of Marketing Practices, FTC, to Barry Augustinsky, SIPJoin Holdings Corps. (Apr. 3, 2020), *available at* <https://docs.fcc.gov/public/attachments/DOC-363522A4.pdf> (last visited May 6, 2020); Letter from Rosemary C. Harold, Chief, Enforcement Bureau, FCC, and Lois C. Greisman Associate Director, Division of Marketing Practices, FTC, to Muhammad Khan, VoIP Terminator dba BLMarketing (Apr. 3, 2020), *available at* <https://docs.fcc.gov/public/attachments/DOC-363522A4.pdf> (last visited May 6, 2020);

²⁷ See, Letter from Rosemary C. Harold, Chief, Enforcement Bureau, FCC, and Lois C. Greisman Associate Director, Division of Marketing Practices, FTC, to Jonathan Spalter, President & CEO, USTelecom — The Broadband Association (Apr. 3, 2020), *available at* <https://docs.fcc.gov/public/attachments/DOC-363522A2.pdf> (last visited May 6, 2020).

²⁸ *Id.*

²⁹ *STIR/SHAKEN Mandate FNPRM* at ¶ 61.

subsequent intermediate or terminating voice service provider in the call path. This would require that the Identity header be forwarded to the subsequent voice service provider in the SIP INVITE transmitted by the Intermediate Provider. The Intermediate Provider should pass unaltered the STIR/SHAKEN attestation they receive from other service providers and should be prohibited from manipulating the STIR/SHAKEN identity header information inconsistent with industry standards when transmitting this information to the subsequent service providers.³⁰

The Commission should not require Intermediate Voice Service Providers, who should be receiving traffic already signed by originating service providers upstream from them (unless those service providers are not yet covered by the mandate), to place STIR/SHAKEN attestations on calls that they handle. The use of the “C”-level attestations by Intermediate Voice Service Providers should be permitted but not obligatory.³¹ The Commission should focus on promoting an ecosystem where STIR/SHAKEN authentication framework can retain its value in analytics and device display, which means requiring *Originating* Voice Service Providers to authenticate traffic so that terminating service providers can validate the authenticated calls. Adding a C-level attestation to an unsigned call at an intermediate service provider’s gateway³² would not in any way authenticate the traffic and thus would not help achieve the Commission’s or Congress’s call authentication goal. Instead, the Commission should encourage voice service providers and analytics to differentiate calls with meaningful attestation such as “A”-level attestation that can elevate that confidence about the calling party. While C-level attestations in certain contexts may have some usefulness in the future depending on how industry best

³⁰ *Id.* at ¶ 63.

³¹ An Intermediate Voice Service Provider should also be permitted to place an “A” or B” signature onto a call on behalf of an upstream Originating Voice Service Provider, provided that it implements appropriate processes and procedures to ensure that it can properly authenticate the end users and their telephone numbers.

³² *STIR/SHAKEN Mandate FNPRM* at ¶ 64.

practices develop, the Commission should not encourage them and certainly should not mandate their use.

Even more important than the fact that C-level attestations do not advance the goal of call authentication, flooding the ecosystem with billions of calls with C-level attestations of questionable value could result in end user confusion by causing them to incorrectly conclude that they can trust the Caller ID associated with those incoming calls. While in some cases an analytics provider can consume the entire SIP header, and thus has the information needed to treat a call with a C-level attestation as less trustworthy than a call with an A-level attestation, for many other consumers and analytics providers the only information available will be the verstat. Because the verstat provides a binary indication of whether the attested call passed validation, it is not currently possible to rely on it to differentiate between validated calls that have A, B, or C-level attestations. Moreover, as discussed in Section II.E on the impact of the Registered Traceback Consortium, C-level attestations would not materially help for that purpose. The widespread use of C-level attestations would open the risk that some consumers would be harmed by calls that are “validated” based on the existence of a C-level attestation.

IV. EXTENSIONS OF THE STIR/SHAKEN IMPLEMENTATION DEADLINE SHOULD BE GRANTED FOR SMALL AND RURAL SERVICE PROVIDERS AND ALL PROVIDERS WITH PORTIONS OF TDM ON THEIR NETWORKS THAT ARE ABLE TO DEMONSTRATE UNDUE HARDSHIP

USTelecom members and the industry is committed to implementing STIR/SHAKEN on the IP portions of their network for which industry standards have been fully vetted and adopted. For some traffic, Congress appropriately recognized that standards do not presently exist and that the Commission should not mandate STIR/SHAKEN for such traffic. And for certain service providers, whether for IP or non-IP traffic Congress recognized that there may be burdens for such providers that justify extensions of implementation deadlines. The TRACED Act explicitly

directs the Commission to assess any burdens and barriers to (1) voice service providers that use time-division multiplexing network technology (TDM); (2) small voice service providers; and (3) rural voice service providers, and to assess burdens and barriers created by the “inability to purchase or upgrade equipment to support the call authentication frameworks. . . or lack of availability of such equipment.”³³ In connection with the assessment of burdens and barriers to implementation of STIR/SHAKEN, the Commission may also grant a delay of compliance if there is a public finding of undue hardship.³⁴ The Commission should provide an extension to any voice service provider that can prove an undue hardship relative to that network. This includes unreasonable vendor pricing practices. Additionally, many providers may have corner cases in which portions of its network will not be able to deliver authenticated and signed traffic. These corner cases will be different for all voice service providers and therefore the Commission should provide flexibility when determining a provider’s capability of fully implementing the STIR/SHAKEN protocol.

The COVID-19 pandemic³⁵ has also complicated matters by becoming a burden and barrier to implementation for many voice service providers. Resources must now be redirected toward meeting the heightened needs of customers impacted by this global health crisis and keeping these essential networks running in peak condition. Indeed, the continuing crisis may jeopardize compliance. The pandemic is consuming available resources for different classes of service providers across all divisions of their business.

³³ TRACED Act § 4(b)(5)(A)(i)(I)-(II).

³⁴ TRACED Act § 4(b)(5)(A)(ii); TRACED Act § 4(b)(5)(B) (The TRACED Act further creates processes by which voice service providers (1) may be exempt from this mandate if the Commission determines they have achieved certain implementation benchmarks, and (2) may be granted an extension for compliance based on a finding of undue hardship because of burdens or barriers to implementation or based on a delay in development of a caller ID authentication protocol for calls delivered over non-IP networks).

³⁵ See Proclamation No. 9994, 85 Fed. Reg. 15,337 (Mar. 18, 2020) (declaring a national emergency concerning the novel coronavirus disease).

Hardship related to inability to sign TDM calls. As the Further Notice acknowledges, the TRACED Act also directs the Commission to provide a mandatory extension for voice service providers implementing caller ID authentication framework on TDM/non-IP networks, which is not just warranted due to undue hardship.³⁶ In addition to this delay of compliance, USTelecom supports an extension for a reasonable time as necessary to address burdens and barriers to implementation and undue hardship for voice service providers that use TDM network technology and to service providers that materially rely on non-IP technology.³⁷ As Congress has acknowledged, non-IP networks do not have call authentication technology, and the TRACED Act envisions “delay ... until a call authentication protocol has been developed and is reasonably available.”³⁸ The burdens and barriers will vary from service provider to service provider. Some of the challenges these service providers face include lack of a call authentication standard, the lack of network capability that a potential standard may not address, software and hardware upgrades,³⁹ dependence and delays from vendors, the potential of excessive vendor pricing practices and unavailability necessary equipment.

Voice service providers are making “reasonable efforts” and working on solutions to develop a call authentication protocol for non-IP networks.⁴⁰ Given resource constraints for deploying STIR/SHAKEN, the robocall mitigation program described in section II is a viable alternative for STIR/SHAKEN traffic that is unsigned for IP and for non-IP traffic. The Commission should not require participation in working groups, as voice service providers are

³⁶ *STIR/SHAKEN Mandate FNPRM* at ¶ 75; TRACED Act § 4(b)(5)(B) (the Commission “shall grant a delay of required compliance” with the June 30, 2021 implementation date “to the extent that . . . a provider or class of providers of voice services, or type of voice calls, materially relies on a non-[IP] network for the provision of such service or calls”).

³⁷ *STIR/SHAKEN Mandate FNPRM* at ¶ 77.

³⁸ TRACED Act § 4(b)(5)(B).

³⁹ Some vendors may refuse to support end of life equipment as they focus on next generation equipment.

⁴⁰ *Id.* at ¶ 96.

already voluntarily participating, as long as the non-participating voice service provider is willing to implement the ultimate industry solution.⁴¹ To address the challenges of TDM call authentication ATIS-SIP Forum is establishing the Non-IP Call Authentication Task Force, which will complement the work already being addressed in the IP Network-to-Network Interface (IP-NNI) Task Force to develop the SHAKEN series of specifications.⁴² Voice service providers are actively working in good faith and industry should be provided flexibility to develop solutions for TDM and non-IP authentication, without any requirements for “reasonable efforts.”

Undue hardship for small and rural carriers. As an association representing many small and rural companies, USTelecom appreciates the Commission’s consideration of an exemption to the STIR/SHAKEN requirement for small and rural companies. To the extent the Commission grants a blanket one-year undue hardship extension for all small or rural providers, such an extension should only be available for those providers that register and certify to the Commission that they have a robocall mitigation program in place as described in Section II. USTelecom understands that small providers may face difficulties in implementing STIR/SHAKEN for the IP portion of their networks, including resource constraints, the inability to procure ready-to-install solutions on the same timeframe as the nation’s largest voice service providers, and to obtain solutions from a variety of vendors.⁴³ At the same time, the

⁴¹ Caution must be taken to not unintentionally overwhelm the industry standards group with those that are merely attempted to “check the box” for participation.

⁴² See The Alliance for Telecommunications Industry Solutions (ATIS), Non-IP Call Authentication Task Force, available at <https://www.atis.org/initiatives/non-ip-taskforce/> (last visited May 14, 2020) (The Non-IP Call Authentication Task Force Discuss will (1) address TDM call authentication issues, (2) gain a fuller understanding of the SHAKEN architecture and governance models that would facilitate consideration of complementary approaches for non-IP networks, (3) investigate the viability of non-SHAKEN, TDM call authentication frameworks and how these would interact with SHAKEN and (4) develop best practices for TDM networks to address issues such as the deployment of relevant IP-NNI Task Force standards).

⁴³ *STIR/SHAKEN Mandate FNPRM* at ¶ 78.

Commission should proceed with caution because, in USTelecom's experience virtually all illegal robocalls are either originated by small IP-based providers or gain access to the United States telephone network through small IP-based providers. Thus, the Commission should be mindful of this fact as it considers any request for delays, and any blanket exemption for small or rural providers must only apply to those companies with a robocall mitigation program in place.

Absent such a requirement, USTelecom would only support the one-year implementation extension due to undue hardship for small voice providers, on a case-by-case basis. USTelecom also supports a one-year implementation extension for rural and regional voice service providers that may face similar burdens and undue hardship as small voice service providers, on a case-by-case basis.⁴⁴ An expansion to regional voice service providers may be necessary because limiting the burden and barriers to implementation to small voice service providers with a 100,000 subscriber-line threshold will exclude many service providers that may have similar resource constraints and technical challenges.⁴⁵

V. AN EXTENSION OF THE STIR/SHAKEN IMPLEMENTATION DEADLINE SHOULD BE PROVIDED FOR ENTERPRISE CALLS AND FOR COMPLEX CASES FOR WHICH INDUSTRY STANDARDS ARE NOT YET DEVELOPED

The deployment of STIR/SHAKEN is still in its infancy. For many calls the process will be straightforward and clearly covered by existing standards and best practices. For other scenarios, including many enterprise calling situations, there is a significant degree of complexity and industry is still working through how to address such calling patterns. And for some calls, such as complex enterprise traffic, there is no industry standard in place today to enable call authentication. For such complex use cases where industry standards and/or best

⁴⁴ *Id.* at ¶ 80.

⁴⁵ *Id.* at ¶ 79.

practices are not yet in place, the Commission should provide industry the necessary flexibility to establish solutions.

For example, the Commission should grant an extension of undue hardship for complex cases for certain enterprise calls⁴⁶ and should not rush to adopt a mandate that would prescribe the use of B and C-level attestation for signing enterprise calls. As discussed above, there are substantial benefits from A-level “Full Attestation” where the originating provider knows the identity of the enterprise caller and can confirm that caller has the right to use the phone number as the calling number, but that distinguishing calls that qualify for A-level attestation and calls that qualify for B-level attestation on a call by call basis may not be feasible for many enterprise networks at this time.

USTelecom urges the Commission to be mindful of the potential negative impact on the ecosystem if Commission policy resulted in B or C-level attestation becoming the norm and the potential for illegal robocallers to sign their own calls without sufficient safeguards in place. Some USTelecom members are currently working with enterprise customers on providing the ability for their enterprise customers to have certain enterprise calls signed with A-level attestation this year. These early, relatively simple use cases should be encouraged, but additional time is necessary for the standards bodies to work through the numerous other scenarios applicable to enterprises signing and to develop industry protocols and/or best practices for those scenarios.

As part of the TRACED Act, Congress directed the Commission to “issue best practices that providers of voice service may use as part of the implementation of effective call authentication frameworks to take steps to ensure the calling party is accurately identified.”⁴⁷

⁴⁶ *Id.* at ¶ 82.

⁴⁷ TRACED Act § 4(b)(7).

The North American Numbering Council (NANC) and the Call Authentication Trust Anchor Working Group has been tasked to provide the Commission recommendations for these best practices which include “guidelines or standards providers should use when assigning the three attestation levels of the SHAKEN/STIR framework” and “how should these best practices vary depending on the type of subscriber, such as between large enterprises, individuals, and small businesses.”⁴⁸ Therefore, the Commission should wait until these best practices and industry standards are developed before mandating implementation of STIR/SHAKEN for enterprise calls.⁴⁹

VI. THE COMMISSION SHOULD NOT MANDATE THE USE OF NON-STANDARDS-BASED STIR/SHAKEN FRAMEWORKS SUCH AS “OUT-OF-BAND STIR”

As USTelecom has proposed,⁵⁰ as the Commission moves forward with the implementation of STIR/SHAKEN, it should be mindful of the need to incentivize full standards-based solutions that have been sufficiently explored and vetted and agreed to by industry, particularly for calls on legacy networks. The Commission should not adopt workaround solutions that may have the unintended effect of discouraging the adoption of the full STIR/SHAKEN standard or that may introduce unnecessary cost, complexity and risk for callers or voice service providers. USTelecom agrees with the Commission’s understanding that the “Out-of-band STIR” framework is still in “infancy and is not readily available to be implemented.”⁵¹ There are policy and technical concerns with nonstandard-based workarounds

⁴⁸ See, Letter from Kris Monteith, Chief, Wireline Competition Bureau, FCC, to Jennifer McKee, Chairperson, NANC, (Feb. 27, 2020), available at <https://docs.fcc.gov/public/attachments/DOC-362809A1.pdf> (last visited May 6, 2020).

⁴⁹ *Id.* (Directing the NANC to approve a written report on its findings on these issues, and to transmit that report to the Wireline Competition Bureau no later than September 25, 2020).

⁵⁰ See Letter from Farhan Chughtai, USTelecom, to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket No. 17-59; WC Docket No. 17-97 (filed Mar. 04, 2020).

⁵¹ *Id.* at ¶ 82.

for certain traffic, including Out-of-Band STIR. At this time there is no complete standard for Out-of-Band STIR with industry consensus. Some claim there are draft standards for Out-of-Band STIR.⁵² STIR is the device-to-device authentication, while SHAKEN is the application of STIR protocol between networks. At this time there are no draft or industry-wide, agreed-upon standards for Out-of-Band SHAKEN. There is much more work to do be done in fully developing the Out-of-Band STIR/SHAKEN standards. Without further investigation, it is not clear that there may be alternate call authentication solutions that may be applied to overcome potential deficiencies of the application of Out-of-Band SHAKEN to non-IP networks.

Any nonstandard-based proposed solutions that would delay STIR/SHAKEN implementation, and worse yet, potentially negatively impact callers and providers by increasing complexity and potential scalability and security issues, must be avoided. The Commission should be skeptical of the viability of Out-of-Band STIR as an alternative to STIR/SHAKEN for any calls unless and until a standard is developed for such a solution that is accepted with industry-wide consensus. The Commission should proceed with caution before adopting any alternative call authentication solution to prevent a focus on non-standards-based solutions and adding additional burdens on those voice service providers that are already implementing STIR/SHAKEN on the IP portions of the network.⁵³ As there may be other alternatives developed, the Commission should allow industry to innovate and develop an acceptable solution.

⁵² See Letter from Jim Dalton, TransNexus, to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket No. 17-59; WC Docket No. 17-97 (filed March 23, 2020).

⁵³ See also Letter from Beth Chorozer, Comcast, to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket No. 17-97; WC Docket No. 20-67 (filed March 12, 2020) (“... out-of-band STIR is an untested, time-consuming, and costly approach that would require re-creation of multiple network functions in parallel to IP networks”).

VII. ACCESS TO TOLL-FREE AND NON-TOLL-FREE NUMBERING DATABASES SHOULD NOT HAVE A MANDATED “KNOW YOUR CUSTOMER”

The Commission seeks comment on whether it should modify its policies regarding access to toll free and non-toll free numbering resources to help reduce illegal robocallers’ access to numbering resources.⁵⁴ The Commission should not require applicants for numbering resources to provide a certification that the applicant “knows your customers” because it is unnecessary and unrelated in this context. The service providers demand for numbering resources and associated processes for requesting numbering resources is very different from the varied types of accounts and processes for account establishment. For example, some specific requests for numbers may be for serving a particular customer that only requires a terminating service. Thus, a know your customer obligation would offer little value since they would not be originating potential illegal calls. Moreover, a request for numbers may only be needed for serving a reseller of service and it is the reseller that should have the “know your customer” obligation, not the voice service provider that obtains the numbers. The Commission should not impose a mandate to impose prescriptive “know your customer” certification requirements.

Instead, if the Commission adopts USTelecom’s proposal for the robocall mitigation program defined in Section I, the program itself will include a meaningful set of “know your customer” obligations that appropriately apply to *any* service provider that originates traffic (whether or not it has access to numbering resources). This application requires either that the provider either is implementing STIR/SHAKEN (which requires it to “know its customer”) or that the provider has a sufficient robocall mitigation program in place. The robocall mitigation program application of its “know your customers” requirement should therefore not be applied to those voice service providers accessing numbers, but rather to the end users of those providers.

⁵⁴ *Id.* at ¶127.

VIII. CONCLUSION

Given the rapid and ever-changing nature of the robocall problem, multifaceted holistic approaches are necessary and indeed, beneficial to mitigating the harms resulting from such illegal calls. It is essential that the Commission implement a robocall mitigation program where every voice service provider should be required to certify that for all traffic not signed with STIR/SHAKEN, it has an appropriate robocall mitigation program in place that is designed to (1) prevent the origination of illegal calls; (2) identify if its network is being used to generate such illegal calls, and; (3) quickly mitigate such activity once detected. The Commission has emphasized the importance of flexibility and a diversity of approaches to stopping illegal and unwanted calls. This approach enables industry to address new and emerging challenges efficiently, creatively and effectively. We encourage the Commission to continue collaborating with industry while allowing innovation and reasonable flexibility as we tackle the complexities of widespread implementation of STIR/SHAKEN.

Respectfully submitted,

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May 15, 2020