Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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

COMMENTS OF INCOMPAS

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COMMENTS OF INCOMPAS

INCOMPAS submits these comments in response to the Federal Communications Commission's ("Commission") *Sixth Further Notice of Proposed Rulemaking* in WC Docket No. 17-97 seeking comment on the use of third-party solutions to authenticate caller ID information and the impact these arrangements have on the STIR/SHAKEN ecosystem.[1]

I. INTRODUCTION & SUMMARY

As the Commission examines industry efforts to implement STIR/SHAKEN as a call authentication trust anchor, INCOMPAS commends the agency for seeking additional information about third-party caller ID authentication solutions—practices that help to promote more SHAKEN-signed calls through increased signing options for voice service providers. INCOMPAS represents competitive voice service providers that operate a variety of voice service models and fill a number of roles in any given call path—serving at times as an originating, intermediate, gateway, underlying, reseller or terminating provider. These providers are offering services in a complex voice service marketplace that goes beyond the traditional

[1] *Call Authentication Trust Anchor*, WC Docket No. 17-97, Sixth Report and Order and Sixth Further Notice of Proposed Rulemaking, FCC 23-18 (rel. Mar. 17, 2023) ("*Sixth Further Notice"*).

model of retail telecommunications providers serving a single end user. Resellers or enterprise customers that originate calls may not have complete control over all aspects of their network infrastructure, the technical capabilities, or personnel to be able to implement and maintain the STIR/SHAKEN framework on their own.

As a result, many of our members have adopted third-party authentication services in various ways. Indeed, it is possible for these providers to partner with outsource solution vendors or underlying providers to meet call authentication requirements, including signing calls in a transparent manner through the STIR/SHAKEN framework. As the STIR/SHAKEN framework is implemented through the ecosystem, for those that cannot maintain the framework natively, third party authentication has been a way to meet the Commission's current requirements to transmit authenticated caller ID information to the next voice service provider in accordance with the ATIS technical standards as they were envisioned. While common misunderstandings persist about STIR/SHAKEN, third party solutions were explicitly incorporated into ATIS' STIR/SHAKEN technical standards and the pronouncements of industry governance structures like the Secure Telephone Identity Governance Authority ("STI-GA") and do support the overarching objective to enhance transparency in IP traffic exchange.

Under the current framework, third party caller ID authentication has offered important solutions to providers and customers that otherwise would have been unable to sign their own calls. Given the success providers have had with such arrangements, INCOMPAS recommends that the Commission take no action that would prohibit or unnecessarily limit a provider's ability to use third parties to authenticate caller ID information in order to satisfy its STIR/SHAKEN obligations.

Specifically, in these comments, INCOMPAS identifies the different arrangements that exist between providers and third parties while explaining how this practice satisfies the Commission's existing authentication requirements. Next, we discuss how "Know Your Customer / Know Your Upstream Provider" and contractual requirements are enabling information sharing and providing the necessary assurances to allow third parties to sign calls with A- and B-level attestations. Furthermore, INCOMPAS urges the Commission not exclude resellers and other value added providers from the definition of the term "customer" for purposes of the STIR/SHAKEN standard as has been suggested by some stakeholders. This term was carefully calibrated during the development of the STIR/SHAKEN technical standards and efforts to limit its meaning to "end users" would threaten a market-based solution that has increased the value of the STIR/SHAKEN framework. Finally, INCOMPAS contends that additional requirements for identifying third party solutions in the Robocall Mitigation Database are unnecessary and may deter providers from trying these solutions.

II. THIRD-PARTY CALLER ID AUTHENTICATION SOLUTIONS INCREASE VOICE SERVICE PROVIDERS STIR/SHAKEN SIGNING OPTIONS AND SHOULD NOT BE PROHIBITED OR UNREASONABLY LIMITED

a. Third-Party Caller ID Authentication Arrangements Fill an Important Place in the STIR/SHAKEN Ecosystem

As an initial matter, the Commission seeks comment on the full scope of the various arrangements in place that utilize third-party caller ID authentication in various forms. INCOMPAS has been a long-standing advocate for standards-based solutions to "the wholesale gaps" that have existed in the early iterations of the STIR/SHAKEN framework such as delegated certificates, hosted certificates, and expanded token access to voice service providers.[2]

[2] *See* Comments of INCOMPAS, CG Docket No. 17-59, WC Docket No. 17-97, 6-7, 13 (filed July 24, 2019) (explaining how certificate delegation would allow enterprise and reseller

Further, it is well known that some wholesale providers have proactively enabled STIR/SHAKEN and are positioned to sign calls that they deliver for their customers, either using that customer's token or alternatively using their own token in accordance with the STIR/SHAKEN technical standards. Carriers that have proactively deployed STIR/SHAKEN in their networks for all service provider roles they may hold, sign unattested calls that they receive from upstream customers consistent with ATIS standards as conceived and written (as well as Commission requirements). In fact, demonstrating the value and validity of this reality are the Commission's most recent efforts to address "wholesale gaps" that became clear with gateway and intermediate providers that have led the agency to mandate this very same solution.[3] While a downstream provider may not be offering signing service *per se*, signing calls that were not signed up-stream from known, vetted customers is one type of third-party authentication that is an operational reality of the marketplace and entirely in keeping with the ATIS standards as conceived and written.

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providers to sign calls for common scenarios where legitimate callings models—like telecommunications relay—may utilize numbers from third-parties or multiple underlying carriers); Comments of INCOMPAS, WC Docket No. 17-97, WC Docket No. 20-67, 7 (filed May 29, 2020) (contending that effective delegation of certificate authority would enhance the application of STIR/SHAKEN and provide their customers with an opportunity to sign calls for a wide range of use case scenarios); Comments of INCOMPAS, CG Docket No. 17-59, WC Docket No. 17-97 (filed Aug. 17, 2022) (explaining the association's work with the STI-GA to address STIR/SHAKEN adoption, token access, and third-party caller ID authentication).

[3] *See Advanced Methods to Target and Eliminate Unlawful Robocalls, Call Authentication Trust Anchor*, CG Docket No. 17-59, WC Docket No. 17-97, Sixth Report and Order in CG Docket No. 17-59, Fifth Report and Order in WC Docket No. 17-97, Order, Seventh Further Notice of Proposed Rulemaking in CG Docket No. 17-59, and Fifth Further Notice of Proposed Rulemaking in WC Docket No. 17-97, FCC 22-37 (rel. May 20, 2022) ("*Gateway Provider Order*"); *see also Advanced Methods to Target and Eliminate Unlawful Robocalls, Call Authentication Trust Anchor*, CG Docket No. 17-59, WC Docket No. 17-97, Seventh Report and Order in CG Docket No. 17-59 and WC Docket No. 17-97, Eighth Further Notice of Proposed Rulemaking in CG Docket No. 17-59, and Third Notice of Inquiry in CG Docket No. 17-59, FCC 23-37 (rel. May 19, 2023) ("*Seventh Report and Order*").

It should also be noted that our members are engaging in third-party caller ID authentication in a manner consistent with best practices recommended to the Commission by the North American Numbering Council.[4] For providers that are unable to obtain a SPC token, it is critical that they be able to provide sufficient information regarding the appropriate attestation level for their voice traffic to a third-party signing calls on their behalf. Some INCOMPAS members that handle calls that originate outside the United States have employed technical and contractual solutions that have allowed them to work with U.S.-based partners "to apply the full range of SHAKEN attestations to calls originating overseas."[5] These providers have segmented their international voice traffic via a multi-trunk approach into separate streams that correlates with the three attestation levels.[6] When this voice traffic is delivered, the third-party authenticating the traffic is able to use this information to apply the correct attestation level before sending the traffic to another downstream provider or its termination point.

b. Third Party Authentication Satisfies the Commission's Authentication Requirements

While the evolution toward broad token access should be encouraged, expecting a flash-cut to the most ideal version of the vision for the STIR/SHAKEN framework is not practical. Given that the ATIS standards offer providers the necessary flexibility to determine when

[4] *See* North American Numbering Council Call Authentication Trust Anchor Working Group, Best Practices for the Implementation of Call Authentication Frameworks at 15-16 (2020), https://docs.fcc.gov/public/attachments/DOC367133A1.pdf ("2020 NANC Best Practices Report").

[5] *Id*. at 15.

[6] *See* Comments of BT Americas Inc., WC Docket No. 17-97 (filed Jan. 29, 2021) at 2 (describing the "mechanism that would permit intermediate carriers who have direct relationships with foreign originating providers, like BT, to sign calls with the highest attestation level where possible so that downstream carriers can use the STIR/SHAKEN framework to distinguish legitimate calls from unlawful calls").

conditions have been met to confer a specific attestation, a third party can authenticate calls on behalf of a provider with an A- or B-level attestation in a manner that satisfies the Commission's requirements. Because these arrangements typically include a direct authenticated relationship with the customer, calls are assigned an attestation level based on the STIR/SHAKEN standards as defined in the *Sixth Further Notice*—A- or B-level attestation is applied depending on whether the upstream carrier is using their own or a downstream carrier's telephone number, and C-level attestation is permissible when there is no knowledge of or connection with the end user. C-level attestation is sometimes the only option for gateway providers and others to sign inbound calls from outside the United States, but is nevertheless helpful in traceback requests as it can provide the Commission, the Industry Traceback Group, and law enforcement with information about providers in the call path.

The flexibility in the standard was intended to accommodate a variety of third-party solutions for the complex wholesale/resale realities of the communications marketplace with services like those offered by INCOMPAS members and ensure that they could provide signing service with A- or B-level attestation, if appropriate. While INCOMPAS has been a vocal advocate for certificate delegation as a standardized solution to wholesale gaps in the framework, it has stalled for lack of widespread adoption. As a result, providers and their customers continue to explore ways that they can enable STIR/SHAKEN with their services, including measures like "hosted certificates" or "certificate signing as a service" or "signing on behalf of," among potential other approaches and features like "delegated certificates" and the use of "Orig ID fields." Downstream providers signing calls with A- or B-level attestations when traffic is received from a known customer upstream is entirely proper under the standards and can be very effective when combined with the use of "Orig ID" information. Wider and more standardized

use of "Orig ID" in the IP header holds considerable promise for advancing STIR/SHAKEN and should be encouraged by the Commission. As described below, there are a number of ways, independent of the nature of a relationship between an originating provider and third party, in which the signing entity can have knowledge of the calling party's identity or can assure knowledge of that identity (even without contractual privity) to ensure signing a call with an A- or B-level attestation is appropriate. Furthermore, the inclusion of the term "customer" as opposed to "end user" in the standard was an intentional choice made by the standards-making body to ensure that providers that serve non-retail markets could take advantage of the benefits of the STIR/SHAKEN framework by engaging in practices such as third-party authentication. This "intermediate provider loophole" is part of the "wholesale gap" that INCOMPAS helped highlight and the Commission is addressing by virtue of the rules it has recently adopted in its *Sixth Report and Order*.

c. Information Sharing and Know Your Upstream Provider Requirements Enable Transparency Through Signing Calls in the Early Deployment Phase of the STIR/SHAKEN Roll-Outs

As noted above, the STIR/SHAKEN standards provide deliberate flexibility for how attestation levels are assigned to calls in a particular call flow, including how providers in a third-party authentication arrangement share information that allows the signing entity to apply the appropriate attestation designation. To ensure that calls are signed with applicable attestation levels, signing entities will contractually require a reseller or customer to maintain requisite knowledge of the end user's identity without requiring the disclosure of information that implicates privacy, security or other legal concerns. The "Know Your Upstream Provider"

("KYUP") requirements that the Commission adopted for gateway and intermediate providers[7] represents increasing awareness of the complex realities of the marketplace and a significant step towards ensuring that signing entities will have the information they need to determine the appropriate attestation level. Where upstream customers have been vetted and on-boarded through established KYC/KYUP processes and procedures and in accordance with Commission rules, it is appropriate for a downstream provider to sign traffic it receives from upstream customers that have not otherwise been signed in accordance with the ATIS standards as written—A-level if the traffic is coming from the downstream carrier's telephone number or B-level if the validated upstream customer is sending traffic from telephone numbers that are not the carrier's registered telephone numbers.

As noted by the Commission in its *Gateway Provider Order* and *Intermediate Provider Order*, particularly when a signing entity has its own separate customer relationships, there is considerable benefit to the first STIR/SHAKEN-capable provider in a call chain signing the calls that it receives and passes downstream for termination.[8] While INCOMPAS believes it would be inaccurate to characterize a signing entity as "standing in the shoes of the originating provider,"[9] a downstream provider signing calls that have not otherwise been signed provides more benefits than harms to the STIR/SHAKEN ecosystem. Additionally, signing produces enhanced transparency and if there are issues to be addressed the party that has signed is now known and

[7] *See Gateway Provider Order* at para. 96 *et seq*. (adopting "Know Your Upstream Provider" requirements for gateway providers); *see also Seventh Report and Order* at para. 49 *et seq*. (adopting "Know Your Upstream Provider" requirements for intermediate providers).

[8] *Id.* (requiring all voice service providers to take steps to know the immediate upstream provider).

[9] *Sixth Further Notice* at para. 99.

can work to mitigate issues that may be identified downstream at the terminating end of a call. If the intent of the Commission and the industry is to obtain greater transparency, it should continue to encourage providers to obtain their own tokens and allow those tokens to be utilized through standardized arrangements, or it would also benefit from encouraging the proper and standardized use of the "Orig ID field" throughout the service chain.

d. Third-Party Authentication Provides More Options for Providers that are Unable to Sign Calls, Increasing the Value of STIR/SHAKEN

Third-party caller ID authentication benefits the STIR/SHAKEN ecosystem by increasing the number of calls that are signed with a SHAKEN signature and by expanding the variety of signing options available to voice service providers and their customers. INCOMPAS has argued that end-to end implementation of the STIR/SHAKEN framework among voice service providers will have a "significant impact in curtailing illegal robocalls" which is critical to restoring consumer trust in the voice network. While a SHAKEN signature might not reveal anything about the intention of the calling party or whether or not the call is a robocall, signing a call with the appropriate attestation designation can have important value. A C-level attestation attests to bringing the call to the network—even without other information about the caller or their right to use the number. An A- or B-level attestation indicates that the identity of the customer is known and includes knowledge of the customer's right to use the telephone number in CLI. This is useful because it prevents illegal spoofing, and it facilitates traceback.

With various standardized third-party caller ID authentication solutions, the industry has been able to adopt market-based solutions that meet the near term needs of providers and customers otherwise unable to sign their own calls. The Commission would be well served by encouraging more STIR/SHAKEN utilization, including creative third party solutions, rather than taking any specific regulatory action such as authorizing, prohibiting, or limiting the use of

the STIR/SHAKEN framework. Third-party authentication has evolved to address today's complex communications marketplace—complexities the Commission has encouraged through past rulemakings[10]—and the agency should not reverse course on key aspects of its past decisions that have allowed these market-based solutions to take hold.

Similarly, the Commission should not, at this time, make changes to the standard, such as requiring third parties to sign calls using the provider's SPC token. While there are a number of "wholesale gaps" in the ecosystem, the STIR/SHAKEN framework does envision a number of flexible third-party solutions that could be utilized. The industry governance authority for the STIR/SHAKEN framework ("STI-GA") is well-positioned to consider recommended changes to the technical standard if it determines such changes are necessary and appropriate. Furthermore, it is worth highlighting the Commission has recently taken important steps to explicitly require gateway providers and intermediate providers to deploy and support STIR/SHAKEN. These regulatory actions should help distinguish between other "third party authentication" solutions like certificate delegation and hosted certification versus simply the first party in the call flow attesting to its previously unsigned upstream calls in accordance with ATIS standards.[11] With the final STIR/SHAKEN deployment deadline for small providers and gateway providers and intermediate providers occurring on June 30, 2023, and December 31, 2023 respectively, much

[10] The Commission selected STIR/SHAKEN as an appropriate technical standard for its primary call authentication trust anchor efforts, including the common model the standard presented for third-party authentication. The agency rulemaking model is not ideally suited to the development of industry technical standards, including other call authentication standards that may be developed in the future, and the Commission should not use this rulemaking as an avenue to restrict or change aspects of the standard.

[11] *See* Notice of Ex Parte of Transnexus, WC Docket No. 17-97 (filed May 22, 2023).

of this prior confusion should become clearer and help advance further transparency and adoption of STIR/SHAKEN throughout the ecosystem.

e. The Commission Should Not Modify the Definition of "Customer" Under the Standard

The Commission seeks comment on whether the agency should clarify that for the purposes of the STIR/SHAKEN standard a "customer" should be defined as an "end user," and not a wholesale upstream provider. INCOMPAS urges the Commission to reject this clarification as several ATIS STIR/SHAKEN standards make it clear that "customer" was never intended to be so narrowly defined. As illustrated by the Cloud Communications Alliance ("CCA"), the definition of "customer" in these standards was intentionally considered and includes "not just end users but also resellers or value added service providers ("VASPs") that subscribe directly to the [originating service provider's] services."[12] Because the proposal to modify the definition "conflicts with the governing documentation set forth in ATIS standards," it should be abandoned.[13]

Furthermore, such a clarification would inadvertently eliminate legitimate business models and enterprise calling use cases that rely on the current interpretation of the standard. In fact, there are voice service products in existence that do not have a concept of an end user and industry is also considering expanding the standard to include passport extensions like rich call data. Additionally, CCA provides examples of VASPs that would be affected by such a change,

[12] *See* Letter of Michael H. Pryor, Counsel to the Cloud Communications Alliance, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 17-59, WC Docket No. 17-97 at 1-2 (filed Nov. 8, 2022) (indicating that ATIS STIR/SHAKEN-related documents define "customer" to include resellers and value added service providers) ("CCA Ex Parte").

[13] *Id*. at 2.

including over-the-top hosted or cloud service providers, such as unified communications providers, Communications Platforms as a Service providers, hosted Private Branch Exchange providers or contact centers.[14] This clarification would inhibit the beneficial enhancements of the standard that have been implemented or are being studied, such as the expanded and standardized use of "Orig ID" in the STIR/SHAKEN header information. Ultimately, the Commission should allow organizations like ATIS, which are overseeing the technical standard, to consider policy changes such as the proposed clarification, which would immediately impact existing authentication solutions.

f. Additional Robocall Mitigation Database Requirements for Third-Party Caller ID Authentication are Unnecessary

Finally, the Commission questions whether it should amend its rules to require providers to identify any third-party solutions it employs in their Robocall Mitigation Database certifications and robocall mitigation plans. In the fight against illegal robocalls, the Commission must encourage constant innovation and having to constantly update one's suppliers, third-party providers, and mitigation measures will deter interest in trying out a variety of different solutions across one's network. The Commission can benefit from investigating, analyzing and understanding the different use cases and technologies that are being deployed in the ecosystem by providers dedicated to eradicating this threat.

III. CONCLUSION

INCOMPAS strongly supports the efforts of our members to develop and implement market-based solutions that address the need of originating providers and customers that, up to this point, have been unable to implement the STIR/SHAKEN framework. In this proceeding,

[14] *Id.*

the Commission should encourage the wide-spread adoption of STIR/SHAKEN rather than taking measures to discourage proactive deployments. Transparently signing calls in accordance with the framework's technical standards is beneficial, and not a threat or harm. The Commission would be well served to continue to understand how STIR/SHAKEN is utilized at the terminating end of calls before it declares any current valid standardized third party solutions unacceptable. INCOMPAS members are proactively and increasingly deploying STIR/SHAKEN solutions that will benefit the public interests in increasing numbers, including via third-party caller ID authentication solutions. Rather than take premature regulatory action, the Commission should allow this valid, standardized marketplace solutions to evolve while also continuing to analyze and understand how terminating call presentation is utilizing STIR/SHAKEN more transparently.

Respectfully submitted,

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