

**STIR SHAKEN Risk Mitigation Plan
for Robo-calls & Spoofed Calls
Linq Telecom LLC.
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1 PURPOSE

Linq Telecom LLC (LINQ) is a Communications Provider under 47 C.F.R. § 4.3 (b). This Risk Mitigation Plan covers LINQ. Pursuant to *Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act*, Pub. L. No. 116-105 (2019) (TRACED Act), the Federal Communications Commission (FCC) has issued certain rules requiring that communications providers to implement call authentication framework and other robocall mitigation practices in combination with anti-Spoofing rules collectively known as STIR/SHAKEN. *See*, 47 C.F.R. § 64.6301 *et. seq.*, and 47 C.F.R. § 64.6305 *et. seq.*

The STIR/SHAKEN framework allows voice service providers to verify that the caller ID information transmitted with a particular call matches the caller's number, while protecting consumer privacy and promoting the ability to complete lawful calls. LINQ has implemented a third-party off-the-shelf component to address the STIR/SHAKEN rules and compliance guidelines set forth by the FCC. This Risk Mitigation Plan has been implemented in combination with such guidelines and solutions for LINQ.

Compliance Requirements Met by this Plan:

- Implement reasonable steps to avoid originating illegal robocall traffic.
- Ensure a commitment to fully and timely respond to all traceback requests from the Commission, law enforcement, and the industry traceback consortium authorized, or otherwise approved by the FCC for traceback efforts.
- Ensure cooperation with such entities in investigating and stopping any illegal robocallers that use LINQ's service to originate or transport calls over its intermediate carrier network.
- As an intermediary, LINQ will not block calls as stated under the STIR/SHAKEN framework for any packet, regardless of whether that packet lack proper originating carrier information within call transport protocols in the IP Messaging of the calls placed through LINQ's network. Intermediaries will simply copy inbound identity header information to outbound packets and transmit as needed.

1.1 STIR/SHAKEN Compliance

STIR/SHAKEN is an industry-developed framework designed to allow communications service providers to distinguish legitimate calls from illegally spoofed calls so that they can take steps to mitigate the illegal calls. STIR/SHAKEN utilizes an encrypted authentication and verification process that establishes a chain of trust between the calling party and the called party. Specifically, the originating carrier (or

the earliest carrier in a call chain with authority) is responsible for authenticating calls by “signing” them with an encrypted digital signature and one of three attestations for the callers’ identity: (i) A (or “full”) attestation means the provider can confirm the identity of the caller and the legitimate use of the calling number; (ii) B (or “partial”) attestation means the provider can confirm the identity of the caller but not the telephone number; and (iii) C (or “gateway”) attestations means the provider is the point of entry to the IP network for a call that originated elsewhere, such as a call that originated abroad or on a domestic network that is not STIR/SHAKEN-enabled. When the terminating provider receives a call for delivery to an end user, it is responsible for verifying the call using a verification service and for determining how to treat the call, such as by allowing trusted calls to pass to the called party, showing the called party a warning that the call may be illegitimate, or blocking the call if the provider believes the call is illegal. STIR/SHAKEN only works on Internet protocol (IP) networks. FCC Rules require communication providers and “voice service providers” to implement STIR/SHAKEN in the IP portions of their network. LINQ is such a provider as an intermediate carrier.

A “voice service” is broadly defined as any service that is interconnected with the public switched telephone network (PSTN) and that uses numbers from the North American Numbering Plan (NANP). It includes all common carrier voice providers, interconnected Voice over Internet Protocol (VoIP) providers, one-way VoIP services, fax transmissions and services, and over-the-top voice services (e.g., Skype, Google Voice).

A communications service provider’s obligations will vary depending upon the role that it serves for particular calls, or even whether it is the provider of voice service on a particular call. Therefore, providers should examine their services closely to determine the extent to which the provider offers voice service on the call.

STIR/SHAKEN Obligations

Generally, the obligations of a voice service provider depend on where the provider is in the call path for a particular call, these are:

- *Originating* providers must: (a) authenticate and verify SIP calls originated and terminated on their networks, and (b) authenticate SIP calls it will exchange with other voice service providers.
- *Intermediate* providers must: (a) pass authentication information to the next provider in the chain unaltered, and (b) authenticate un-signed calls (subject to certain exceptions). We understand that intermediaries are not mandated to check databases or validate upstream/downstream partner traffic at this time.
- *Terminating* providers must verify SIP calls they receive from other providers for termination to the end user.

LINQ is an Intermediate provider/carrier that supplies wholesale services to retail carriers. LINQ DOES NOT Originate or Terminate calls. Per the STIR/SHAKEN Rules and framework, voice services provider definition, an individual service provider could serve different roles for different calls. Thus, a provider may have originating provider obligations for some calls, intermediate provider obligations for others and terminating provider obligations for others. Service providers must be prepared to comply with all these obligations in their IP networks. LINQ has implemented protocols for all such scenarios.

Implementation Requirements – Tokens

Before a provider can begin authenticating or verifying calls, it must obtain a certificate from the certificate authority designated by the FCC. This first involves obtaining a Service Provider Code (SPC) token from the FCC's selected governance authority, which indicates that the provider is qualified to receive a certificate. The service provider submits the SPC token to the certificate authority to obtain a certificate. Once the certificate is obtained, the provider or third-party service can begin authenticating and verifying calls. This is a multi-step process with detailed qualification obligations. As an intermediate carrier, LINQ does not have direct access at this time to NANPA support facilities for an SPC. As such, LINQ has not implemented the protocol which REQUIRES that any call passed through its network MUST contain an SPC or otherwise be BLOCKED. LINQ will, in contrast, pass the packets on by copying the identity header information from packets received to packets sent.

Exemptions

There are five exemptions from implementing STIR/SHAKEN the above protocol:

- *Small Providers* – Providers with 100,000 or fewer subscriber lines have an additional two years, until June 30, 2023, to implement STIR/SHAKEN.

LINQ has no subscriber lines.

- *Unable to Obtain SPC Tokens* – Providers that are unable to obtain the SPC tokens necessary to authenticate calls have an **indefinite exemption** from implementing STIR/SHAKEN until the provider is capable of obtaining a token. However, calls from this service provider may be authenticated by the next carrier in the chain of completion. Such calls are likely to receive a lower attestation level than the originating service provider could provide. **LINQ and its subsidiaries have implemented a protocol matching this authentication framework and coordinates with its originating and terminating carriers.**

- *Services Subject to Discontinuance* – For services subject to a pending Section 214 discontinuance as of June 30, 2021, providers have an additional year, until June 30, 2022, to implement STIR/SHAKEN for the services, unless the service is discontinued before then. **This exception is inapplicable to LINQ.**

- *Non-IP Portions of Networks* – The non-IP portions of a provider's network have an **indefinite exemption** from STIR/SHAKEN implementation but are subject to other requirements discussed below.
- *Case-by-Case Exemption* – Providers can petition the FCC's Wireless Bureau for an exemption or extension for implementing STIR/SHAKEN on a case-by-case basis; the formal petition deadline has passed, but the Bureau may still consider new petitions. **No Petitions have been made by LINQ under this exemption.**

IP Network Mandate

As STIR/SHAKEN does not work on non-IP networks, the FCC has implemented other requirements for those network portions to mitigate illegal calls. Specifically, LINQ must either (a) upgrade their entire network to IP, or (b) participate in the development of a call authentication standard for non-IP calls (either directly or indirectly through a trade group) *and* implement a robocall mitigation program for the non-IP portions of their networks. LINQ has implemented a robocall mitigation program. This robocall mitigation program includes:

1. LINQ takes reasonable steps to avoid originating illegal robocall traffic by use of reasonable analytics. LINQ has implemented a process through a third-party provider, authorized by the FCC to complete this requirement.
2. LINQ commits to respond to requests from the Industry Traceback Group to trace suspect calls for mitigation efforts. LINQ is a member of US Telecom and its Traceback Group. Technical employees have been reasonably trained in STIR/SHAKEN requirements, this Plan and interfacing with the Traceback Group.
3. LINQ has developed procedures for its employees to identify, investigate and optionally stop any illegal robo-callers. As an intermediary, suspect or nonconforming SPC calls shall not be blocked, however suspect caller patterns that are believed to be illegal shall be logged and/or blocked as per our Customer discretion.

Proof of Implementation

Type of exemptions and specific steps taken to avoid originating illegal robocalls:

- **Unable to obtain SPC directly.** LINQ has implemented a protocol matching this authentication framework and coordinates with its originating and terminating carriers as SPCs are unavailable to it directly. As an intermediary, LINQ will not block calls onto its network that do not contain an SPC. LINQ has advised carriers passing originating calls of its protocol. LINQ has advised its terminating carriers of its protocol and should, for any reason, a call from LINQ's network not contain a SPC to block the call and advise LINQ of the call details to investigate. As an intermediary, LINQ will copy inbound identity header information into its outbound packets and route the call accordingly. LINQ has implemented code to specifically copy the identity header information from inbound to outbound packets. LINQ has also upgraded a key Common Off-The-Shelf (COTS) 3rd-party Software Package which is used in its solution stack to the latest version which contains a module that will fully address STIR/SHAKEN compliance and although it is not necessary as an intermediary to perform full look-ups and validations, LINQ stands ready to do so if regulations should change.

LINQ's has trained key and technical personnel on the TRACED Act, and stands ready for any changes required for intermediaries regarding STIR/SHAKEN by upgrading its **software stack** to be able to implement complete STIR/SHAKEN Compliance if called upon to do so and has developed specific procedures to fully respond in a timely manner to all traceback requests; as well as to cooperate in investigating and stopping illegal robo-callers using its service. The above has been tailored to LINQ's services and Customer base and involves a multi-faceted approach.

Further Applicable Considerations/Exceptions for LINQ's STIR.SHAKEN Compliance

The FCC has made the following clear:

- *Resellers* – The FCC has specified that the STIR/SHAKEN implementation requirement does not apply to providers that lack control of the network infrastructure necessary to implement the framework, so resellers do not have any implementation obligations themselves. However, because a wholesaler may not have a direct relationship with the resellers' subscribers, the wholesaler may or may not be positioned to provide higher-level attestations for the subscribers to ensure those calls are trusted in all instances. As such, resellers

with high-volume calling subscribers may utilize contractual mechanisms with their wholesalers so that their subscribers' calls will be signed with the highest attestation level possible.

- Further, the robocall mitigation program requirements apply to a reseller regardless of its STIR/SHAKEN obligations. LINQ has developed this plan in order to identify and mitigate unlawful robocalls originating with their carrier Customers.

- *Exclusive Wholesalers* – Wholesalers who control the network infrastructure, they are responsible for implementing STIR/SHAKEN or robocall mitigation across their networks and for complying with the certification requirements. Wholesalers are responsible for blocking calls that are determined or suspected to be illegal, they may have to block calls from their resale Customer subscribers. A wholesaler may be subject to greater scrutiny if the subscribers of their resale Customers generate illegally spoofed calls. Wholesalers are encouraged to use contractual mechanisms with their resale Customers to prevent the Customers from developing relationships with subscribers who generate illegally spoofed calls and to limit liability when the wholesaler must block the calls of a resale Customer's subscribers.

- *Foreign Voice Service Providers* – Although the FCC does not have the authority to mandate that foreign voice service providers implement STIR/SHAKEN, foreign voice service providers are, as a practical matter, obligated to file a robocall mitigation certificate with the FCC that they have implemented a robocall mitigation program in order to avoid blocking of their traffic by downstream providers. Where a question arises as to a particular Foreign Voice Service Provider, LINQ shall request copy of the provider's filed robocall mitigation certificate.

- *International Gateways* – There is no process under the current STIR/SHAKEN framework for international gateway providers to authenticate calls they receive from their foreign provider Customers. This is largely because of differences in international standards for call authentication, which are still under development. LINQ shall request that such international gateways that it has dealings authenticate calls according to industry STIR/SHAKEN standards and obtain relevant information to satisfy the particular attestation or standards established.

- Most gateway providers currently are not permitted to obtain an SPC token. Gateway providers that do not have NANP numbers to obtain SPC tokens may obtain such upon filing of a robocall mitigation program certification. LINQ will verify on a case-by-case basis and document mitigation program certification and SPC tokens passed by such providers.

Waivers of the FCC requirements

No Waiver Petitions have been made LINC and its subsidiaries.