BROADBAND DYNAMICS
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STIR/SHAKEN

BBD STIR/SHAKEN IS HERE

What is Stir/Shaken and how can it benefit my business?

Combating Illegal Robocalls

The fight to stamp out illegal robocalling is a goal shared by BBD and other leading telecom carriers, State Attorneys General, and the Federal Government. BBD is absolutely committed to being a leader in this fight. As a result of illegal robocallers, consumers have become less likely to answer their phones, which hurts companies making legitimate business calls. To combat these problems, the FCC has mandated that both the originating and terminating voice service providers implement STIR/SHAKEN – a caller ID authentication framework - in their networks by June 30, 2021. As an early adopter of STIR/SHAKEN technology, BBD can begin offering STIR/SHAKEN to your business in 2020!

Combating Call Mislabeling

As wireless and wireline carriers introduce algorithms to identify and combat illegal robocalls, legitimate business calls are being swept up by mistake and mislabeled and “Spam” or “Scam” calls. This mislabeling of calls has dramatically reduced call connection rates for companies making legitimate business calls. As a caller ID authentication method, STIR/SHAKEN is designed to segregate legitimate business calls from illegal robocalls by having carriers in the call ecosystem authenticate each individual call as it is handed off through to the called party’s terminating carrier. These changes should result in a reduction of call mislabeling and increase in connect rates for legitimate business callers.

What does STIR/SHAKEN mean?

STIR/SHAKEN are acronyms for the Secure Telephone Identity Revisited (STIR) and Signature-based Handling of Asserted Information Using toKENs (SHAKEN) standards. This means that calls traveling through interconnected phone networks would have their caller ID “signed” as legitimate by originating carriers and validated by other carriers before reaching consumers. STIR/SHAKEN digitally validates the handoff of phone calls passing through the complex web of networks, allowing the phone company of the consumer receiving the call to verify that a call is in fact from the number displayed on Caller ID.

UNDERSTANDING THE TECHNOLOGY

How does STIR/SHAKEN work?

In STIR/SHAKEN, the originating carrier establishes policies to determine calls that should or should not be signed. Using STIR/SHAKEN, the originating carrier queries a Secure Telephony Identity Authentication Service (STI-AS) to obtain a SHAKEN signature. This signature is contained within SIP in the form of the Identity header. Transit carriers pass-through traffic with SHAKEN signatures to carriers that support the SHAKEN framework. Terminating carriers validate the traffic destined to their customers by querying a Secure Telephony Identity Verification Service (STI-VS).

A fundamental part of STIR/SHAKEN is its reliance on the public key infrastructure, similar to how secure websites use SSL certificates. The SHAKEN signature includes a link to a public certificate hosted by a Secure Telephony Identity Certificate Repository (STI-CR). The certificate is issued by a Certificate Authority (STI-CA). The STI-VS fetches the public key certificate from the STI-CR. The STI-VS validates the certificate, gets the public key from the certificate, and verifies the identity header using the public key.

How does BBD make it work for my business?

BBD's STIR/SHAKEN solution includes the existing BBD Session Border Controllers for session-control capabilities and external database called NSS for authentication, verification, and certificate-management requirements. The SBC's and NSS database work in tandem for STIR/SHAKEN functionality and have been validated in the Alliance Telecommunications Industry (ATIS) robocalling testbed, the industry's interoperability test facility.

If you are interested in deploying STIR/SHAKEN for your business, please call 888-801-1034 or email support@broadbanddynamics.com or msherby@broadbanddynamics.com to learn more.

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