Mdecember 3, 2019

Secure Telephone Identity Governance Authority (STI-GA) Update

Overview Shaken/Stir

- SHAKEN (Signature-based Handling of Asserted information using toKENs) is a framework developed by the ATIS (Alliance for Telecommunications Industry Solutions) SIP Forum IP-NNI Task Force that provides guidance on how to use the authentication and verification methods specified by the STIR working group for the purposes of mitigating illegitimate spoofing of calling telephone numbers carried over VoIP networks.

- STIR (Secure Telephone Identity Revisited) is a working group of the Internet Engineering Task Force (IETF). The STIR working group developed standards to support the ability to attest and verify a calling party's authorization to use the signaled calling party number.

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SHAKEN/STIR – What it is

- An industry initiative developed as a tool to aid mitigation of unwanted robocalling and illegitimate calling number spoofing.

- Provides a mechanism for service providers to authenticate and verify the legitimacy of calling numbers and provides a means to convey that information to others.

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Industry Implementation

- In December 2017 the FCC directed the NANC Working Group to recommend a Secure Telephone Identity Governance Authority (STI-GA) structure and timeline.

- On May 3, 2018, the Working Group submitted its recommendation to the FCC

  - The GA should be industry driven.

  - Industry representation should be a broad, multi-stakeholder voluntary representation from the U.S. communications service provider sector.

  - The timeline calls for the Secure Telephone Identity Policy Administrator (STI-PA) to be in place one year after the proposal is submitted to the Commission.

  - Service providers capable of signing and validating VoIP calls should implement the standard within one year of the report.
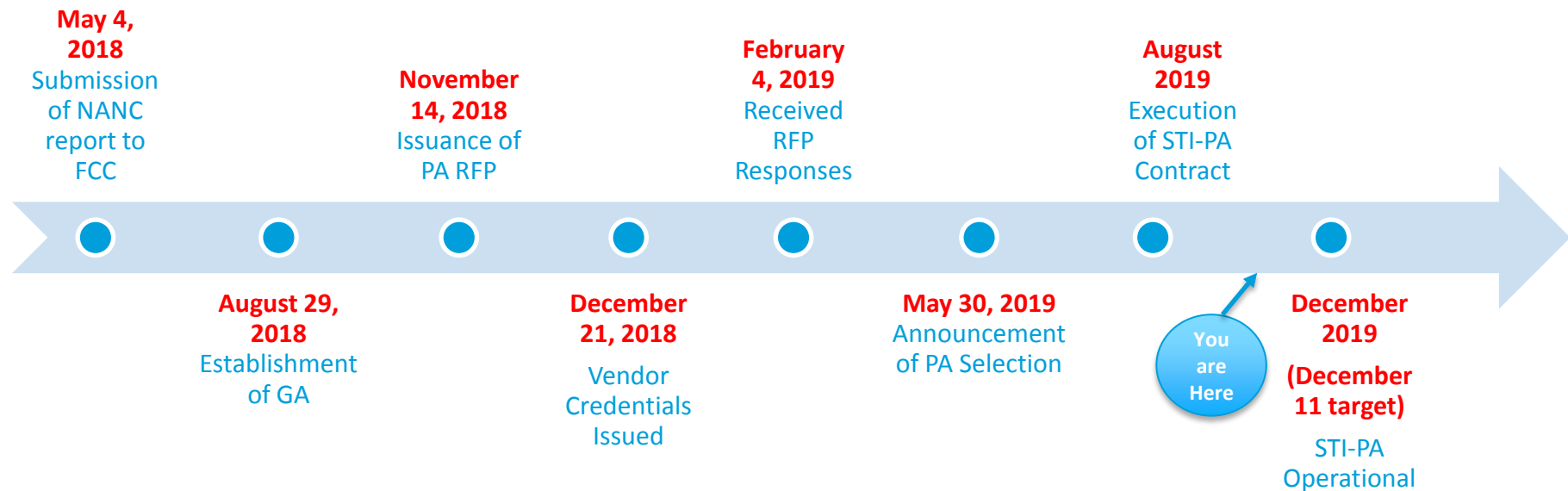
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STI-GA and STI-PA Overview

- The STI-GA ensures the integrity of the issuance, management, security and use of Secure Telephone Identity certificates issued in compliance with the SHAKEN specification.

- The STI-PA applies and enforces the rules as defined by the STI-GA

  - Verifies that a Service Provider (SP) meets the defined criteria for participation in the SHAKEN framework before issuing "Service Provider Code tokens" to the approved SP.

  - Renews the Service Provider Code token as required, after verifying that the SP continues to meet the criteria to participate in the SHAKEN framework. The Service Provider Code token is used for authentication when the SP obtains Secure Telephone Identity (STI) certificates from an approved Secure Telephone Identity Certification Authority (STI-CA).

  - Approves STI-CAs and verifies that the STI-CA meets all requirements of its Certification Practice Statement to assess compliance with the Certificate Policy.

  - Securely maintains a "trusted STI-CA" list and distributes this to all SPs participating in the SHAKEN ecosystem.

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STI-GA Status

- On May 11, 2018 the Chief of the Wireline Competition Bureau sent a letter to the NANC indicating support for the CATA Working Group Recommendation.

- The industry groups selected ATIS as the GA and identified members for the STI-GA Board.

- The GA was officially launched on August 29, 2018. and the Industry Board quickly went to work developing an RFP for the Policy Administrator (PA).

- The RFP was issued on November 14, 2018.

- Proposals were submitted February 4, 2019

- The selection of the STI-PA was announced May 30, 2019

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Timeline/Milestones

May 4, 2018
Submission of NANC report to FCC

August 29, 2018
Establishment of GA

November 14, 2018
Issuance of PA RFP

December 21, 2018
Vendor Credentials Issued

February 4, 2019
Received RFP Responses

May 30, 2019
Announcement of PA Selection

August 2019
Execution of STI-PA Contract

You are Here

December 2019
(December 11 target)
STI-PA Operational

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STI-GA Next Steps

- The STI-GA is targeting December 11, 2019 to be operational

- Acceptance Testing between PA and Service Providers almost complete

- The PA is working with CAs.

- The STI-GA Board is finalizing the funding methodology.

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SHAKEN Certificate Management Flow (high level)
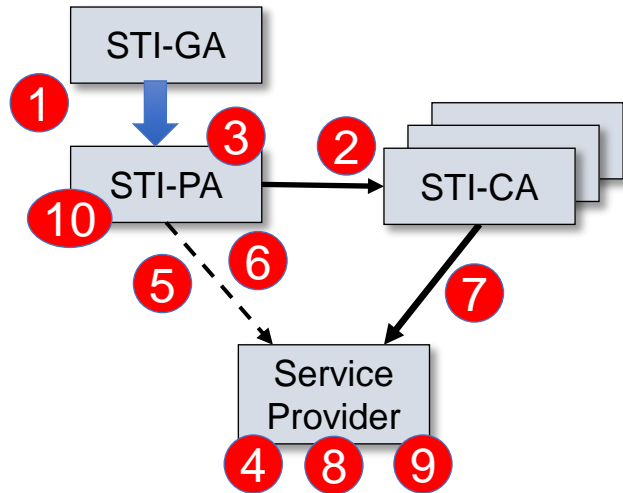
1. STI-GA selects STI-PA
2. STI-PA approves STI-CAs
3. STI-PA maintains secure list of approved STI-CAs
4. SP joins SHAKEN ecosystem
5. SP requests Service Provider Code Token from STI-PA
6. STI-PA validates SP and grants Service Provider Code Token
7. SP selects STI-CA and uses Service Provider Code Token as part of defined process to obtain STI certificates
8. Service provider uses STI certificate to generate SHAKEN Identity header
9. Terminating service provider uses STI certificate (public key) to verify SHAKEN Identity header
10. Part of verification process is to confirm that issuing certificate is from an approved STI-CA

Benefits and Limitations of SHAKEN/STIR

Benefits

1. Consumers will have more information when deciding whether to answer a call; and

2. The identity of the origination point of the call onto the network is included with the call authentication information.   Knowing the originating point will accelerate illegal robocall tracebacks and enforcement.

Limitations

1. It can only identify if a call was spoofed – not whether or not the caller is a scammer.

2. It only works on an IP end-to-end call path.

3. The benefits will not fully materialize until all service providers implement the SHAKEN/STIR standards.

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Robocalls | It Takes a Village