**Compliance and Enforcement and Telecom Notice of Consultation
CRTC 2019-404
Call for comments – Authentication/verification measures for caller
identification for IP-based voice calls – Implementation of
STIR/SHAKEN framework**

Submission of the
Internet Society Canada Chapter

WHO WE ARE

1)   The Internet Society Canada Chapter (ISCC) is a not-for-profit corporation that
engages on internet legal and policy issues to advocate for an open, accessible and
affordable internet for Canadians. An open internet means one in which ideas and
expression can be communicated and received except where limits have been imposed by
law. An accessible internet is one where all persons and all interests can freely access
websites that span all legal forms of expression. An affordable internet is one by which
all Canadians can access internet services at a reasonable price.

2)   ISCC is fully aware of the impact that fraudulent and nuisance calls have on
Canadians and we applaud the CRTC for pushing forward technological solutions to
these problems. When fully implemented, SHAKEN/STIR will reduce the impact of
fraudulent calls on Canadians and allow for easier investigation and traceback of calls to
the originating party.

3)   ISCC intervenes in this proceeding because we strongly believe that the deployment
date of September 30th, 2020 for the implementation of the SHAKEN/STIR framework is
too aggressive. As we will show below, there are serious issues that have not been
addressed. Mandating the use of this technology before they are resolved could have
disastrous implications for smaller Canadian carriers.

4)   Members of the ISCC have been following and participating in various working
groups related to SHAKEN/STIR for several years now. Through our members'
participation in these groups, ISCC has identified two key issues a) lack of clarity
surrounding who will be able to participate as an "authorized TSP" as outlined in CRTC
2019-403, and b) in the event that not all Telecommunications Service Providers can
participate, the negative impacts that this absence would produce.

WHO CAN PARTICIPATE IN SHAKEN/STIR?

5)   There are over 1200 entities registered with the CRTC as Resellers of Telecommunications Services[1]. These resellers provide valuable telecommunications services to Canadians, including services such as business Hosted PBX platforms, residential over the top products, and others innovative voice services. Many of these TSPs do not have their own numbering resources. They rely on the services of underlying CLECs, LECs, SILECs, and others to obtain the numbering resources which they need to operate.

6)   These smaller TSPs are generally interconnected via Internet Protocol (IP) to upstream carriers via Session Initiation Protocol (SIP) and therefore in the best position to implement the SHAKEN/STIR framework, however they have not thus far been involved in the implementation plans. This is generally because there is no clear direction from the CRTC or the Canadian Secure Token Governance Authority (CSTGA) on who will be able to obtain certificates and sign calls and what if any role these smaller TSPs will play. In the United States, as an example, the issuance of certificates has been limited to providers that have their own numbering resources leaving these smaller players unable to participate.

7)   Should the same policy apply in Canada, the result could have immense consequences on TSPs who cannot participate.

8)   The reason for this is that the SHAKEN/STIR standard defines 3 levels of Attestation for a phone call:

      • Full Attestation (A) — The service provider has authenticated the calling party and they are authorized to use the calling number. An example of this case is a subscriber registered with the originating telephone service provider's softswitch.

      • Partial Attestation (B) — The service provider has authenticated the call origination, but cannot verify whether the call source is authorized to use the calling number. An example of this use case is a telephone number behind an enterprise PBX.

      • Gateway Attestation (C) — The service provider has authenticated from where it received the call, but cannot authenticate the call source. An example of this case would be a call received from an international gateway.

9)   On the surface, this does not app to be a problem – TSPs who are not issued certificates will have their calls signed at B or C level attestation.   But as the technology becomes widely deployed, network based call screening services will look at B and C level calls more suspiciously than A level calls, with the result that they may filter them

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[1] https://applications.crtc.gc.ca/telecom/eng/registration-list?_ga=2.2790576.1697620185.1580093672-1953692077.1579026250\

more aggressively. Some carriers or customers may start to reject calls that do not have an A level attestation.

10) If TSPs cannot provide calls with A level attestation to customers, this may cause them to move their business to someone who can provide A level attestation for all calls, and thereby create a two-tiered telecommunications system in Canada – those who can sign and those who cannot.

LACK OF PUBLIC INFORMATION

11) In Compliance and Enforcement and Telecom Decision CRTC 2019-403[2], the Commission approved the establishment of the CSTCS as Governance Authority as part of the deployment of SHAKEN/STIR framework in Canada.

12) In paragraph 23 of that decision the Commission indicated that the CSTGA should "involve Canadian TSPs in its activities and share its work plan with TSPs to efficiently implement the STIR/SHAKEN framework in Canada". Nevertheless, there is no information available on the CSTGA website[3] on the implementation of this technology, nor is there any clear direction on who the CSTGA assumes will be able to participate in the signing of calls.

13) With no clear direction on which parties will be able to sign calls, no Policy Administrator (PA) selected, and no Certificate Administrator chosen yet, smaller players who cannot afford to participate in groups such as the CSTCS, ATIS, or dedicate a resource to CISC are not able to get the information they require. In our view the CSTGA should be directed to publicly post its work plan and activities related to the SHAKEN/STIR deployment on its website. This is a basic rule of how Internet and other technical governing bodies operate and there should be no exception here.

14) Further to the above, if participation in SHAKEN/STIR is made open to all Canadian TSPs, then the fees for participation in this system need to made clear by the CSTGA and the selected Certificate Administrator – the smaller telecommunications providers need to budget and account for these additional costs.

Conclusion

15) SHAKEN/STIR are technical advances that are much needed to curb the growing scourge of fraudulent and nuisance calls. We need to ensure the technology is implemented correctly and in an open and transparent fashion. Like other internet technologies, we must ensure that all players, including small TSPs, can participate on an

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[2] https://crtc.gc.ca/eng/archive/2019/2019-403.htm
[3] https://cstga.ca/

equal footing. If parties cannot participate equally in this standard setting process, they will be greatly disadvantaged.

16) Therefore, the ISCC respectfully urges the Commission to refrain, at this point in time, from issuing a firm date for the deployment of SHAKEN/STIR. We request that the Commission issue clear guidance on who will be able to sign calls in Canada, and direct the CSTGA to provide a clear, publicly accessible, deployment plan to all TSPs before an implementation date is chosen.

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