The View From Canada

2021 STIR/SHAKEN VIRTUAL SUMMIT
Keynote Session
STIR/SHAKEN in Canada

🍁 A view from the Canadian Governance Authority
🍁 Standards and guideline development
🍁 Regulatory direction and STIR/SHAKEN deployment
STIR/SHAKEN Governance Authority - Canada

Jacques Sarrazin,
President and CEO, Canadian Secure Token – Governance Authority
Objective

• Background
• Structure
• PA/CA
• PMA
• Shareholders’ Board
In 2018 the CRTC directed the Canadian telecommunications industry to establish a consortium, similar to CLNPC, to fulfill the role of STIR/SHAKEN Governance Authority (GA) for Canada.

- CLNPC is incorporated and wholly owned by all Canadian carriers required to participate in local number portability. All 69 Shareholders are represented on the Board of Directors.
- CLNPC’s independent management team is accountable to the Board; this arrangement proved itself effective at balancing the collective interests of the Shareholders.

Through an initiative led by a group of CLNPC Shareholders CST-GA was incorporated in 2018.
Corporate Structure

• Early 2020 the CST-GA unanimous shareholders’ agreement, which defines matters such as corporate structure, eligibility and funding, was adopted among the founding shareholders settling in place a corporate structure similar to CLNPC.

• Management and administrative services for CST-GA are delivered through a Shared Services Agreement with CLNPC, allowing for cost efficiencies.

• Fees are allocated based on subscribers.

• A technical committee representing a cross section of the industry provides guidance to the Board on technical matters.
GA Mandate

- ATIS 1000080.v003
  - Define policies and procedures governing which entities can acquire STI Certificates - all Canadian carriers, registered and in good standing with the CRTC are eligible to join CST-GA and acquire an SPC token.
  - Establish policies governing which entities can manage the PKI and issue STI Certificates – a Policy Management Administrator (PMA) has been established to manage the PKI and a Certificate Policy (CP) published defining the requirements to issue STI-Certificates.
Roles

- Management, reporting to the Shareholders' Board, are responsible for strategic planning and day to day management of the consortium.
  - Jacques Sarrazin, President
  - Scott Fletcher, Corporate Counsel (Gowlings LLP)
  - Marian Hearn, Executive Director
  - Lee Diep, accounts and administration
- Shareholders’ Board directs the work of Management and has final authority over all decisions. Every Shareholder has a representative on the Board. There are currently 32 Shareholders.
PA/CA

• Early 2020, Neustar were selected to provide a combined PA/CA solution by October 1, 2020, the initial CRTC deadline for implementation of STIR/SHAKEN in Canada; which has since been deferred to 30 November 2021).

• The Board elected to initially implement a combined solution to ensure that at least 1 CA would be available to users for the October deadline. It was always intended that eventually there would be additional CAs for users to choose from.

• The GA controls the authorized user list for the solution.
PMA

• Q2 2021 the PMA was established and following a review of the initial Certificate Policy, issued CP V1.1 which includes a number of technical, business and legal changes.

• The PMA is currently reviewing two additional Certificate Practice Statements.

• The next priority for the PMA will be to review and revise the CP to support delegate certificates as defined in ATIS 100092.
Shareholders’ Board

• The GA Board is, among other things, evaluating its position on:
  • RespOrg eligibility
  • Cross Border Attestation (ATIS 100087) where it will be necessary for STI-GA leadership and the CST-GA Board to develop appropriate terms and conditions between the governance authorities to ensure the continued integrity and security of each ecosystem.

• A revocation and reinstatement policy is being drafted and review of eligibility requirements is ongoing as needs emerge and are defined.
CISC - a Canadian approach to technology guidelines

The mandate of the CISC is to undertake tasks related to technological, administrative and operational issues on matters assigned by the CRTC or originated by the public, that fall within the CRTC's jurisdiction.
CISC Steering Committee

BPWG
Business Process Working Group

CSCN
Canadian Steering Committee on Numbering

ESWG
Emergency Services Working Group

WPWG
Wireless Public Alerting Working Group

NTWG
Network Working Group

https://crtc.gc.ca/cisc/eng/ciscgr-cdcigr.htm
Large initiatives such as S/S are broken into composite parts for analysis.

<table>
<thead>
<tr>
<th>TIF 37</th>
<th>TIF 38</th>
<th>TIF 40</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Canadian TSP Readiness</strong>&lt;br&gt;● 4 status reports&lt;br&gt;● Aided in establishing timelines</td>
<td><strong>Traceback</strong>&lt;br&gt;● Study and trial leading to recommendations on implementation methodology</td>
<td><strong>STIR/SHAKEN Guidelines</strong>&lt;br&gt;● Industry-initiated development of guidelines for Canadian implementation</td>
</tr>
</tbody>
</table>
Regulatory status

- Canada has only one telecom regulator, the Canadian Radio-television and Telecommunications Commission (CRTC).
- Since 2016, the CRTC has urged the Canadian industry to implement measures to combat nuisance calls and fraudulent calls. It has either encouraged or directly ordered:
  - call filtering
  - call blocking
  - call traceback
  - STIR/SHAKEN
- Starting in 2018, the CRTC ordered progress reports regarding STIR/SHAKEN readiness, implementation and performance.
STIR/SHAKEN in Canada

What’s resolved from a regulatory perspective?

All telecommunications service providers must implement STIR/SHAKEN

- by Nov 30, 2021
- for “IP-based voice calls”

What remains outstanding?

Eligibility to obtain tokens. Carriers only or all voice service providers?

https://crtc.gc.ca/eng/archive/2021/2021-123.htm
Developing the Canadian Implementation Guideline

Intended to support the CRTC and the industry, the STIR/SHAKEN guideline document developed by TIF 40 is intended to address the following:

- Highlighting issues that will remain after the initial implementation and how that may affect public perception of STIR/SHAKEN
- Developing an implementation guideline for the Canadian industry including a central reference for which features are to be implemented and how
- Ensure maximum effectiveness of STIR/SHAKEN at any stage of development and implementation
- Promote consistency of approaches where interoperability or public perceptions are affected
- Minimize disruption

https://crtc.gc.ca/public/cisc/nt/NTRE072.doc
The following are some issues identified by CISC as potentially causing delays in implementation or unfavourable public perceptions.

- Solutions for enterprise customers
- Absence of support for toll-free calling
- Insufficient testing time and likelihood of ‘false positives’
- Lacking support for International calls
- Vendor timelines

Vive la différence?

- Canada has a significant amount of domestic, TDM interconnection
- Canadian nuisance traffic is predominantly international in origin
- Handset displays - Analytics are not as common in Canada
- Canada predominantly sends Calling Name in the INVITE message (spoofable)
- Prevalence of UNI between TSPs
- Lacking “Safe Harbour” legislation
FCC experience as a future mode of operation?

- Focus of much discussion amongst Canadian Service Providers
- Consternation about rules
  - Who should register?
  - What about Tier III?
- Loss of our seamless border (in telecom terms)
- Imagine multiplied on an International scale as other countries adopt STIR/SHAKEN!
A global problem necessitates a global solution

- Cross-border STIR/SHAKEN is very important!
- FCC restrictions may leave foreign bad actors looking for alternative routes
- Traceback activities leading to overseas points of origin will lack enforceability
- Post-domestic launch this needs to be a high priority enhancement
Questions?