**Contribution:** IP-NNI Task Force

**Source:** Jim McEachern, Principal Technologist, ATIS

**Title:** Considerations for International SHAKEN

**Introduction**

The SHAKEN specification only defines operation within a single country. This approach was taken to avoid adding complexity to an already difficult problem. The standard was developed to address U.S. requirements, but the specification should be equally applicable to other countries. It was generally recognized that at some point consideration would need to be given to SHAKEN attestation for calls that originate in one country and terminate in another country, but this has not been explicitly addressed.

There are now two countries actively deploying SHAKEN; the U.S. and Canada. Therefore, it is appropriate to begin consideration of a recommended strategy to federate SHAKEN across two or more countries.

**Discussion**

Two broad approaches have been suggested to “internationalize” SHAKEN. These are:

**Bilateral cooperation**: SHAKEN specifications state that the STI-PA approves STI-CAs using criteria established by the STI-GA and then distributes the list of “Trusted STI-CAs” to all service providers in the SHAKEN ecosystem. This effectively creates the “root-of-trust” for SHAKEN. This framework was developed in the context of a single country, but nothing in the existing technical specification precludes two STI-GAs deciding they will recognize each other’s STI-CAs and instructing their respective STI-PAs to merge their “Trusted STI-CA” lists. The merged trusted STI-CA list could then be distributed to all service providers in both countries, using existing interfaces and procedures. Calls authenticated in one country should then be successfully verified in the other country.

**Central registry**: An Internet Draft submitted by Dr. Eric Burger (<https://tools.ietf.org/pdf/draft-burger-stir-iana-cert-00.pdf>) proposed an IANA Registry for STIR. In this model, each country independently decides when they want to participate in the global SHAKEN ecosystem and populates the registry with information for their country.  STIR/SHAKEN verification would begin with an analysis of the calling number to determine the appropriate IANA registry location to use for verification. This would require changes to the base SHAKEN specification since SHAKEN currently verifies all calls in the same way, independent of the calling number. There may be other impacts to the current specification as well.

**Recommendation**

The IP-NNI TF should evaluate technical specifications to support “internationalization” of SHAKEN. The two approaches outlined above can provide a starting point for this analysis, though other mechanisms could also be considered. The analysis should identify challenges with the various approaches and if possible, recommend a preferred technical mechanism.

**Next Steps**

Follow up contributions, with further analysis of options, will be submitted to the AMOC face-to-face meeting. This contribution should be noted.