



Dr. John Saw
Chief Technology Officer
6550 Sprint Parkway
Overland Park, KS 66215

November 19, 2018

Ajit Pai
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Call Authentication Trust Anchor*, WC Docket No. 17-97

Dear Chairman Pai:

Thank you for your letter of November 5, 2018, regarding the Federal Communication Commission's ("FCC") efforts to combat the problem of illegal and unwanted robocalls. Sprint shares the FCC's goal of ending unlawful caller ID spoofing and continues to work with the industry and the Alliance for Telecommunications Industry Solutions ("ATIS") on strategies to address this serious problem.

More specifically, and as previously stated in its filings before the FCC,¹ Sprint is fully committed to deploying and implementing SHAKEN/STIR. Full deployment of SHAKEN/STIR will be an important step in Sprint and the industry's continuing work to eradicate the plague of illegal and unwanted robocalls.

Sprint is proud to have been an industry leader in efforts to develop and improve SHAKEN/STIR, and in other efforts to eradicate illegal and unwanted robocalls. Sprint participated in all four working groups of the FCC's 2016 Robocall Strike Force and co-chaired the "Empowering Consumer Choice" working group. Sprint was a part of the FCC's North American Numbering Council's Call Authentication Trust Anchor Working Group that led to the establishment of the SHAKEN/STIR Governance Authority. Sprint regularly contributed to the ATIS/SIP Forum Joint Task Force on IP-NNI and submitted the contribution that led to the attestation claim of SHAKEN call authentication signatures.

¹ Letter from Keith Buell to Marlene Dortch, Docket No. 17-59 (May 15, 2018) ("Sprint stated that it supports the adoption of SHAKEN/STIR call authentication by carriers"; Comments of Sprint Corp., Docket No. 17-59 (July 20, 2018) ("Sprint commits to continue to work with the Commission and the industry to reduce the intrusions into daily life caused by unwanted and often illegal robocalls, including efforts to build the SHAKEN/STIR call authentication system."); Reply Comments of Sprint Corp., Docket No. 17-59 (Oct. 8, 2018) ("Sprint continues to support the development and implementation of SHAKEN/STIR").

Sprint has also worked with the industry and third parties to develop other strategies for addressing unwanted robocalls. Sprint worked with TNS and its Cequent mobile client subsidiary to develop an application for Sprint wireless customers that provides a robocall labeling and blocking service called Premium Caller ID. Numerous third-party solutions, some free, are also available to Sprint customers through mobile application stores such as Google Play or Apple's App Store.

The following are responses to the individual questions in your letter:

What is preventing or inhibiting you from signing calls today?

While Sprint is committed to deployment of SHAKEN/STIR and is working with its vendors to begin testing various aspects of these protocols, there are several industry wide steps that must be taken before implementation can begin. The Governance Authority for SHAKEN/STIR was just established, and the request for proposals for the Policy Administrator was just issued on November 15. Once there is a Policy Administrator, it can begin the process of designating Certificate Authorities. Because the certificate infrastructure is not yet established, Sprint and other carriers will be required to develop self-signed certificates and manual distribution as a work-around. Sprint is working to accelerate and streamline the SHAKEN/STIR certificate management process through this interim measure and by using other alternative technologies.

Sprint does not yet have VoIP peers or transit carrier partners who are prepared to accept signed calls from Sprint. Interoperability testing discussions with other major carriers are on-going but are in the early stages.

Finally, Sprint is in the midst of transitioning from CDMA voice to VoLTE. At its core, SHAKEN/STIR is a VoIP technology. There is no vendor support for CDMA voice application of SHAKEN/STIR and improvising a temporary solution would divert time and resources from completing the transition to VoLTE that will fully support SHAKEN/STIR.

What is your timeframe for signing (i.e., authenticating) calls originating on your network?

Sprint plans to conduct testing of SHAKEN signing and verification with large VoIP peering partners in the 2nd half of 2019 with the implementation of VoLTE on Sprint's network.

What tests have you run on deployment, and what are the results? Please be specific.

No tests have been run on deployment, although Sprint anticipates lab and field integration testing in the 2nd and 3rd quarters of 2019.

What steps have you taken to work with vendors to deploy a robust call authentication framework?

Sprint has examined the products of multiple vendors to explore their offerings related to SHAKEN/STIR and how to integrate them into Sprint's existing network architecture. Many of the products are still in development and subject to further revision as the SHAKEN/STIR standards continue to evolve.

Sprint has partnered with TNS and its Cequent subsidiary on its Premium Caller ID product. Sprint and TNS are working together to determine how to incorporate authentication information into the analytics and customer display. Furthermore, Sprint is exploring methods to expand other anti-robocalling solutions to the broader customer base.

How often is Sprint an intermediate provider, and do you intend to transmit signed calls from other providers?

Sprint estimates approximately 1 percent of its traffic is transit traffic. As SHAKEN/STIR is implemented by Sprint and other carriers, Sprint will make every reasonable effort to ensure all calls with signatures received are passed to the next carrier with the SHAKEN/STIR information preserved.

How do you intend to combat and stop originating and terminating illegally spoofed calls on your network?

Sprint has not been a significant originating source of illegally spoofed calls. The vast majority of Sprint's customers are wireless customers, and mobile phones in general have not been the source of illegally spoofed calls. To our knowledge, Sprint's enterprise voice customers have not engaged in illegal spoofing. TNS's data shows that less than 7 percent of illegal and unwanted robocalls appear to originate from the five largest carriers in the United States, and that the majority of the calls in that 7 percent are spoofed and actually originate from other carriers.

For calls terminating to Sprint's customers, Sprint has partnered with TNS to deploy Premium Caller ID service that allows Sprint customers on both Android and iOS devices to subscribe to an optional, paid service that empowers them to receive information about the type of caller that is attempting to reach them and to set up preferences to block spoofed calls and other robocalls.

TNS analyzes more than one billion call events per day across 400 carriers to identify nuisance and malicious calls. Premium Caller ID has processed hundreds of millions of calls for millions of Sprint customers and has categorized 64 million calls as being nuisance or malicious, thereby enabling Sprint's customers to block or decline to answer these calls.

Sprint is exploring additional solutions to provide tools to combat robocalls to a wider customer base.

The Commission has already authorized voice providers to block certain illegally spoofed calls. If the Commission were to move forward with authorizing voice providers to block all unsigned calls or improperly signed calls, how would you ensure the legitimate calls of your customers are completed properly?

Sprint supports blocking of illegally spoofed calls. Sprint recognizes, however, that different levels of blocking will require different levels of analysis and liability protections. When performing opt-in blocking at the device level based on a customer request that they do not want to receive illegal or unwanted calls, Sprint would be lawfully entitled to act. Blocking all calls within the network regardless of customer request raises questions regarding proper identification and appropriate protections that the Commission is currently reviewing.

Sprint is confident that judicious network-level blocking can be done with little risk to legal callers. Carriers and their analytics partners use call routing information, call durations, Caller ID and other network analytics to identify illegal robocalls. SHAKEN/STIR will provide additional information to determine whether a call is spoofed. Sprint currently uses these analytics to empower consumer choice through Sprint's Premium Caller ID app. But with further development, the same analytics could be used to implement network level blocking.

Thank you for your continued efforts and attention to this industry wide problem. Sprint remains committed to combating illegal and unwanted robocalls and will work with the FCC and the industry to develop and implement tools, including SHAKEN/STIR, to resolve this problem once and for all.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Saw", written over a light blue horizontal line.

John Saw
Chief Technology Officer

