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November 19, 2018

Honorable Ajit V. Pai
Chairman
Federal Communications Commission
445 12th Street, SW Room TW-A325
Washington, DC 20554

> **Re: Call Authentication Trust Anchor, WC Docket No. 17-97; Advanced Methods to Target and Eliminate Unlawful Robocalls, CG Docket No. 17-59**

Dear Chairman Pai:

Bandwidth commends the Commission for its continued vigilance in working with the telecommunications industry to find solutions that protect consumers from fraud and abuse in the form of illegal robocalling. Pursuant to your request in your letter of November 5, 2018, I am writing on behalf of Bandwidth Inc. ("Bandwidth") to articulate the role that Bandwidth is playing in these industry efforts.

As a completely IP-based network operator, Bandwidth remains confident that it will be able to adopt SHAKEN/STIR standards, protocols, and processes to enable call attestation, presentation and acceptance with other carriers who are similarly prepared to do so at points in time during 2019. Because key components of the complete SHAKEN/STIR deployment are still in development, it appears that attestation between participating carriers will have to be done pursuant to individually negotiated commercial terms. While Bandwidth expects to engage in initial deployments of STIR/SHAKEN-based commercial traffic attestation in 2019, it is important for the Commission and consumers to appreciate that initial adoptions of SHAKEN/STIR standards will not be an immediate panacea to the ills of robocalling. As Bandwidth discussed with Commission staff earlier this year[1], Bandwidth often serves as an underlying service provider to other innovative communication providers such as Google, Microsoft, Cisco and many more, and the SHAKEN/STIR standards that have been developed thus far do not provide clear answers as to how consumers will receive call authentication information, particularly in

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[1] Letter from Greg Rogers, Counsel for Bandwidth Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket No. 17-59 (filed May 25, 2018).

the instance where underlying providers like Bandwidth are engaged. Bandwidth believes that the industry's efforts to accurately identify valid end-user originated traffic as distinct from illegal robocalls, will hinge critically upon the adoption of a set of Telephone Number Proof of Possession ("TN PoP") standards and best practices along side SHAKEN/STIR.

Bandwidth is concerned that without the adoption of TN PoP standards, innovative communication providers and the consumers that choose to originate their calls through innovative IP-enabled communication platforms will be discriminated against. Bandwidth expects that when it is capable of signing traffic, we will either sign or pass through attestation information on all traffic that traverses our network. This approach will require us to attest to our customers' traffic with either a full or partial attestation, but never unsigned entirely. Often consumer-driven platforms allow consumers to originate calls from telephone numbers provided by another telephone company. In the absence of a standard like TN PoP, Bandwidth may not have strong evidence that the number presented in the call was in fact originated by the valid end-user. Further, Bandwidth remains concerned that traffic that receives a partial, rather than full, attestation may be discriminated against for reasons other than traffic quality. However, with the adoption of TN PoP standards Bandwidth and others should be able to fully attest to all traffic that carries a valid TN PoP certificate with confidence.

In addition to our efforts to implement the most robust call authentication framework possible, Bandwidth is actively taking other steps to reduce the number of illegally spoofed calls our customers receive while also working diligently to stop the transmission of illegally spoofed calls as well. Bandwidth has adopted a three-pronged operational approach (prevent, detect, and mitigate) to stopping illegal robocalls. In keeping with industry efforts and best practices, together with the Commission's guidance.[2] Bandwidth's three-pronged operational procedures are summarized as follows:

- *Prevention:* Bandwidth has launched a series of customer communications aimed to clarify what constitutes unlawful robocalling and instruct our customers to take all available steps to prevent these types of calls from originating from their networks. Bandwidth has also implemented a stringent screening process designed to prevent potential robocalling companies from becoming Bandwidth customers.

- *Detection:* Bandwidth manages processes and procedures to detect and analyze campaigns on our network to determine if they are lawful or not. When unlawful robocall campaigns are detected, Bandwidth works to stop the unlawful activity as quickly as possible. Bandwidth is also in the midst of augmenting its robocall detection technologies - which are expected to dramatically improve our ability to rapidly detect and react to suspected robocall behaviors.

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[2] *See e.g.: In the Matter of Advanced Methods to Target and Eliminate Unlawful Robocalls;* Report and Order and Further Notice of Proposed Rulemaking; CG Docket No. 17-59 (rel. Nov. 17, 2017).

- *Mitigation:* Bandwidth has also developed call-blocking tools to prevent calls with specific unlawful telephone number characteristics from traversing the Bandwidth network. Bandwidth personnel regularly analyze network traffic for unlawful robocall campaigns and utilize our call blocking tools when appropriate. Bandwidth also initiates trouble tickets with customers we've identified to be in the path of unlawful robocalls. Then, we work diligently together with our customers to stop the unlawful robocall campaigns detected.

Finally, Bandwidth is an active participant and leader in industry organizations and industry efforts to stop illegal robocalling. Even prior to the establishment of the Robocall Strike Force,[3] Bandwidth was engaging the FCC and the FBI in efforts to stop consumer fraud in the form of Toll Free Traffic pumping, and participating in the USTA sponsored traceback efforts to identify robocall originators and support enforcement. Bandwidth works closely with the FCC, FTC, FBI and IRS among others in law enforcement. Bandwidth is also actively engaged in working groups and at the board of director level at SIPForum, CTIA, Incompas, and Somos in their respective efforts to address the consumer threats of robocalling. Bandwidth is a member of the NANC, served on the NANC's CATA Working Group and has been selected to be the Incompas representative on the STI-GA Board in charge of overseeing the deployment o the SHAKEN/STIR framework including the procurement of vendors for the critical components of the Certificate Authority and the Policy Administrator. Finally, Bandwidth is also a paid member and participant in the Communications Fraud Control Association (CFCA).

Thank you again for your leadership in addressing this issue of critical national interest. Bandwidth looks forward to continuing its work to simultaneously advance the consumer benefits of competition and innovation in the communications marketplace while protecting consumers from the dangers of illegal robocalling. In accordance with Section 1.1206(b), this letter is being filed electronically for inclusion in the public record of the above proceedings.

Sincerely,

David Morken

cc: Ms. Deborah Salons

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[3] *See:* FCC to Host First Meeting of Industry-Led Robocall Strike Force, Public Notice, DA 16-917 (rel. Aug. 12, 2016).