

July 9, 2019

Commissioner Geoffrey Starks
Federal Communications Commission
Washington, D.C. 20554

Dear Commissioner Starks:

First and foremost, thanks to you and your colleagues at the FCC for the focus you have brought to bear on the very troubling issue of illegal robocalls. I want to assure you, as we have Chairman Pai and Commissioner Roscenworcel, in response to recent inquiries from them on this topic, that rooting out illegal robocalls is a high priority for my company. We alone cannot solve this problem, but I am encouraged by the positive steps that I have seen being taken by regulators, legislators, carriers and app developers to reduce the amount of these abusive and illegal calls. I am enclosing our prior submittals to your colleagues for your information.

In response to your questions about our plans to implement default call blocking services, I advise you as follows. Currently our primary focus is on the implementation of SHAKEN/STIR technology within our network. We have recently selected two vendors, Transaction Network Services ("TNS") and Metaswitch, and we will be working with them in the coming months to ensure a successful launch of SHAKEN/STIR before the end of this year. Metaswitch will be providing the intelligence in our network to be able to both receive and send authenticated traffic to and from participating carriers in the SHAKEN/STIR solution. TNS will be providing us with call analytics through their recent acquisition of Cequent to help us decipher the call information created by SHAKEN/STIR so that we will be in a position to take action on calls that are deemed to be highly likely illegal robocalls. We have yet to flush out all the details as to what action we will take on which calls and what role customers should play in determining whether to accept a call or not. We fully expect that we will get better and more proficient in identifying robocalls over time as we are able to analyze the data created in the SHAKEN/STIR environment. I also want to assure you that we have no intention of imposing a separate charge on customers for blocking robocalls identified as a result of SHAKEN/STIR.

Commissioner Geoffrey Starks

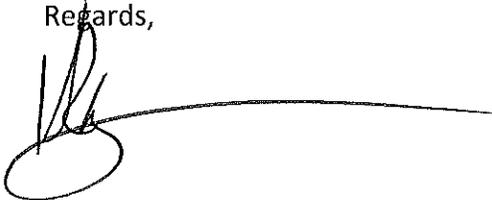
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Unfortunately though, at launch, SHAKEN/STIR will only be useful for traffic originating and terminating on IP networks of carriers who have implemented the technology. Non-IP traffic (such as CDMA or GSM traffic) and traffic from carriers (wireline and wireless) who have not implemented SHAKEN/STIR will obviously fall outside this solution. We are still researching what options might exist for carriers and customers in these circumstances, but before we reach any conclusion about a path forward, we need to see what effect SHAKEN/STIR has on the total universe of illegal robocalls.

We are cautiously optimistic that, provided SHAKEN/STIR is implemented by the major carriers, we will see a profound reduction in the number of illegal robocalls. In the meantime, there are a number of useful apps that customers can use to take proactive steps to reduce the number of robocalls they receive. In our response to Commissioner Rosenworcel, we reference Call Guardian, which is an application that customers can use that has proven quite effective in reducing the number of robocalls received by its users. The Call Guardian app is now controlled by TNS, one of the vendors we have selected to implement SHAKEN/STIR, by virtue of its acquisition of Cequent. We believe that these two solutions, SHAKEN/STIR and the Call Guardian, operating in concert will have a substantial impact on the total number of illegal robocalls customers receive. Call Guardian is not a default service as described in the Commission's June 6th order since it needs to be activated by customers who then can choose between a number of options that best suits their individual needs for handling the calls that they receive. There is both a free and a premium subscription product available. We believe this app will continue to have utility for some time to come to bridge the gap between IP traffic (which we expect to grow significantly over time) and traffic for which SHAKEN/STIR is not an option. We commit to provide you with timely updates as our post SHAKEN/STIR launch plans come more into focus next year.

Regards,

A handwritten signature in black ink, consisting of a stylized 'G' and 'S' followed by a long horizontal line that ends in a small loop.



Geoffrey Starks
Commissioner

Federal Communications Commission
Washington, D.C. 20554

June 10, 2019

Kenneth R. Meyers, CEO
US Cellular
8410 West Bryn Mawr Avenue
Suite 700
Chicago, IL 60631

Dear Mr. Meyers:

Robocalls have changed the fabric of our culture and, quite literally, broken phone service in this country. Just last month, consumers were bombarded with more than 4.7 billion of these calls. Last week, I joined my colleagues in adopting a *Declaratory Ruling and Third Further Notice of Proposed Rulemaking*¹ that clarified that your company can, without violating Commission rules, deploy a powerful new tool in the fight against illegal and unwanted robocalls – call blocking offered to consumers by default on an informed opt-out basis.

Our action has received enthusiastic support from the public and industry stakeholders, including many carriers.² I am also optimistic, and hope that our approach will empower the public by quickly making call blocking tools available to millions more consumers. While we may have disagreed on some of the details, my fellow Commissioners and I also uniformly agreed that call blocking services should be offered to consumers for free.

I write today, on the heels of our action, to seek information about your timeline for deploying and implementing these services. After all, carriers noted in our record that offering flexibility, as the Commission did, rather than implementing prescriptive rules and requirements, would be the best approach to ensuring that consumers are able to access these tools as quickly as possible.³ Accordingly, I am interested in learning more about your plans to make these services available to your consumers.

¹ *Advanced Methods to Target and Eliminate Unlawful Robocalls; Call Authentication Trust Anchor*, CG Docket No. 17-59, WC Docket No. 17-97, Declaratory Ruling and Third Further Notice of Proposed Rulemaking, FCC 19-51 (June 7, 2019).

² See, e.g., David Shepardson, U.S. FCC makes it easier for phone companies to block 'robocalls', Reuters, June 6, 2019, <https://www.reuters.com/article/us-usa-fcc-robocalls/us-fcc-makes-it-easier-for-phone-companies-to-block-robocalls-idUSKCN1T725J>; Press Release, Matthew Gerst, CTIA statement on the FCC's Clarification of the Commission's Call-Blocking Rules (June 6, 2019), <https://www.ctia.org/news/ctia-statement-on-the-fccs-clarification-of-the-commissions-call-blocking-rules>; Press Release, USTelecom, USTelecom Statement on FCC Approval of Blocking Robocalls By Default (June 6, 2019), <https://www.ustelecom.org/ustelecom-statement-on-fcc-approval-of-robocall-blocking-by-default/>; Press Release, ACA Connects, ACA Connects Applauds FCC For Clarifying That Carriers May Offer Robocall Blocking Tools To Consumers On "Opt Out" Basis (June 6, 2019), <https://www.americancable.org/aca-connects-applauds-fcc-for-clarifying-that-carriers-may-offer-robocall-blocking-tools-to-consumers-on-opt-out-basis/>.

³ See, e.g., CTIA Comments, CG Docket No. 17-59, at 2 (rec. Sept. 24, 2018) (stating that regulatory flexibility is necessary to allow industry to address consumer demands in "creative and dynamic ways"); USTelecom Association Comments, CG Docket No. 17-59, at 6 (rec. July 20, 2018) ("flexibility ensures that illegal robocallers are faced with a dynamic and fluid carrier defensive posture that is further enhanced by deployment of more robust consumer tools and increased enforcement efforts"); American Cable Association Comments, CG Docket No. 17-59, at 4-6

Please provide me with full responses to each of the following questions.

1. Indicate whether you will offer your customers default call blocking services on an informed opt-out basis and, if so, provide details of your plans to deploy these services, including a timeline for implementation.
2. Describe how you intend to inform consumers about this service.
3. Indicate whether you expect to act contrary to the Commission's clear expectations and nevertheless charge your customers for these services.
4. If you do not currently plan to offer customers default call blocking services on an informed opt-out basis, please explain why.

I appreciate your attention to this matter and I am grateful for any work you have already done on behalf of consumers and in consultation with the Commission to stem the tide of unwanted and illegal robocalls. I look forward to working together to make sure that we are doing absolutely everything that we can to protect consumers from deceptive and dangerous robocalls and empower them to be free from disruptive and unwanted calls.

Please send your response to me electronically to Geoffrey.Starks@fcc.gov no later than July 10, 2019. If you are not able to fully answer these questions as of the deadline, or if there are any material changes to your responses after submission, please notify my office immediately.

Regards,



Geoffrey Starks



January 14, 2019

Ms. Jessica Rosenworcel
Federal Communications Commission
Washington, D.C. 20554

Dear Commissioner Rosenworcel,

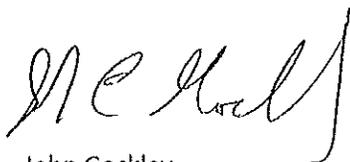
Your letter of December 12, 2018 to Kenneth Meyers, the Chief Executive Office of U.S Cellular Corporation ("U.S. Cellular"), has been forwarded to me for a response. U.S Cellular shares your concern about the proliferation of illegal robocalls and that is why we are so excited about the promise of the SHAKEN/STIR protocol to substantially reduce the number of illegal robocalls. We are aggressively moving to deploy SHAKEN/STIR in our network during the second half of 2019. While everyone would, understandably, like to see this capability deployed sooner the fact is that this is a complicated undertaking that requires promulgation of industry standards, negotiation of vendor contracts and the implementation across the industry for maximum effectiveness. I am attaching our recent response to Chairman Pai concerning the status of our SHAKEN/STIR efforts.

In the meantime, U.S. Cellular provides other tools and capabilities at no charge that consumers may find helpful in combating the problem of illegal robocalls. These include access to Call Guardian, a robocall and call identification application that is pre-loaded on many of our devices. Call Guardian is a free application, provided by a company called Cequent, that provides an on-device warning to consumers when an incoming call is likely a scam or spam call. If the call is presenting a phone number that is one of the 5,000 numbers Cequent has determined to be very likely a scam or spam call, the consumer is alerted and can decide if they would like to receive the call, or ignore it. Cequent utilizes a proprietary algorithm to identify these phone numbers, and the list is actively updated. Additional features and capabilities are available with Call Guardian as part of a subscription offering for \$3.99 per month.

U.S. Cellular also provides consumers with helpful suggestions about how to deal with illegal robocalls on our website, including a link to the national Do Not Call Registry. You can review this information at the following link; www.uscellular.com/robocall. Our website also includes links for consumers to access operating tutorials for each of the devices we sell, including procedures for blocking inbound calls from specific telephone numbers. Our customer support specialists are also happy to answer questions our customers may have about how to reduce the number of robocalls they receive.

Between educating consumers about the tools that are available today, implementation of the call authentication network protocol known as SHAKEN/STIR, and increased enforcement by the FCC and FTC of existing laws against robocall violators, we believe progress is being made to address the plague of unwanted and illegal robocalls. We look forward to continued cooperation with the FCC and the industry on this matter of great importance to customers.

Sincerely,

A handwritten signature in black ink, appearing to read "John Gockley". The signature is fluid and cursive, with a large initial "J" and "G".

John Gockley
Vice President
Legal & Regulatory Affairs



November 19, 2018

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Call Authentication Trust Anchor, WC Docket No. 17-97 –
Ex Parte Notice

Dear Secretary Dortch:

I am writing on behalf of U.S. Cellular in response to Chairman Pai's November 5, 2018 letter to Ken Meyers regarding unwanted robocalls. U.S. Cellular shares Chairman Pai's concerns regarding this issue, and we wish to make it very clear that we are committed to doing everything within our power to timely implement a robust call authentication framework contemporaneously with its deployment within the industry as described below. We have no reason to believe that this capability will not be in place sometime during the second half of 2019.

We have not been standing idly by either in implementing tools to be used in the war on robocalls. In 2016, we introduced our Call Guardian application. This application provides robocall and malicious caller identification, risk level and call blocking capability. While not an all-encompassing solution, it does provide our customers with some degree of protection from robocalls. It is important to keep in mind that the industry-defined SHAKEN/STIR procedures will only apply to SIP-based networks. In the case of U.S. Cellular about 20% of our customer base is currently served today by 4G VoLTE. This is why the Call Guardian application (which works for both CDMA and VoLTE calls) continues to be a useful tool in identifying and thwarting unwanted robocalls. Obviously the percentage of customers on our VoLTE network will grow over time which is why we are so excited about the promise of SHAKEN/STIR.

Turning to the Chairman's specific questions, let me address each in turn:

What is preventing or inhibiting you from signing calls today?

As we are still early in the process of deploying VoLTE across our network, we are currently prevented from signing calls because we only connect to other carrier networks via SS7 ISUP signaling. Our plan is to deploy SIP connectivity and SHAKEN/STIR solution in the second half 2019, which together will give us the ability to sign the calls and pass the signature to other carriers.

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

As I indicated above, we are on pace to implement SHAKEN/STIR sometime in the second half of 2019. In order for SHAKEN/STIR to be operational, we need to establish SIP signaling with all other carriers who are also implementing SHAKEN/STIR. I am happy to report that negotiations for inter-carrier agreements for the use of SIP to carry the signature are currently underway today with two Tier 1 carriers. We expect to begin discussions with other carriers shortly. The more carriers we can exchange signature traffic with via SIP the more effective SHAKEN/STIR will be to thwart illegally spoofed calls.

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

No testing has been run to date as we have yet to commence deployment. Testing will commence in 2019 once our deployment of SIP and SHAKEN/STIR begins.

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

We are in active discussions with various vendors regarding their SHAKEN/STIR based solutions. We expect to issue an RFP for STI-AS (Secure Telephone Identity Authentication Service), STI-VS (Secure Telephone Identity Verification Service), and CVT (Call Validation Treatment – analytic engine) in Q1 2019. We expect to select a vendor and enter into a contract sometime in the second quarter of 2019 so that all necessary testing and implementation work can be accomplished in time for our timely deployment of SHAKEN/STIR in the second half of 2019.

How often is U.S. Cellular an intermediate provider and do you intend to transmit signed calls from other providers?

U.S. Cellular does not act as an intermediate provider for other carriers or enterprise traffic – all traffic leaving the U.S. Cellular network is originated solely within our network except for forwarded calls for which we will preserve and transit the call signatures as part of the SHAKEN/STIR initiative.

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

Today, all subscribers originating calls from the U.S. Cellular CDMA and VoLTE networks are validated during the wireless registration procedure. When a subscriber on our network originates a call, the network ensures that the correct number associated with the user is provided as the calling party number, thus preventing spoofing of the number. This, however, does not prevent spoofing of traffic not actually originating on our network.

When we implement the SHAKEN/STIR solution in the second half of 2019, it should give us the ability to identify valid incoming calls. This information will supplement the analytics logic to provide improved results. The subscriber will be provided the ability to block calls based on these results. Until that time, our Call Guardian application will continue to provide some level of protection.

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?

When we implement the SHAKEN/STIR solution, we are highly confident that we will be able to ensure the completion of legitimate calls of our customers.

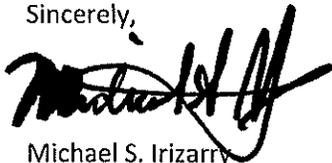
However, it is imperative that the Commission not adopt a rule that would allow the blocking of unsigned calls until full national SIP interconnectivity is established by all carriers. Otherwise, it is possible that even when we provide a signature that the signature will not be carried end-to-end where no direct interconnectivity is present. For example, when communicating through an intermediate carrier, there is no way for us to know if the far carrier is capable of and is in fact providing an authenticated signature.

In addition, if the inter-carrier connections continue to use SS7 ISUP signaling, then it will be practically impossible to signal the necessary information. Even though U.S. Cellular is introducing SIP connections with other carriers, these calls may still be interworked with ISUP at some point outside our network and

beyond our control. Therefore, a mandatory blocking rule may do more harm than good, certainly for the short term. This may be an issue worth revisiting when the implementation of SHAKEN/STIR and the supporting network infrastructure has been fully deployed by the industry.

I hope that our responses assuage any concern that Chairman Pai may have had over the commitment of U.S. Cellular to implement SHAKEN/STIR along with the rest of the industry. If Commission Staff have any further questions regarding any of these responses, please contact me or Grant Spellmeyer of U.S. Cellular at 202-290-0233 or grant.spellmeyer@uscellular.com

Sincerely,

A handwritten signature in black ink, appearing to read "Michael S. Irizarry". The signature is stylized and cursive, with a large initial "M" and "I".

Michael S. Irizarry
Executive Vice President & CTO

CC: Deborah.Salons@fcc.gov