



November 19, 2018

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> 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.

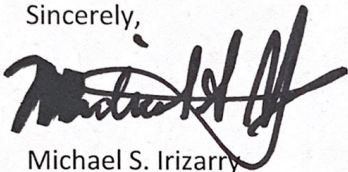
In addition, if the inter-carrier connections continue to use SS7 ISUP signaling, then it will be practically impossible to signal the necessary information. Even though U.S. Cellular is introducing SIP connections with other carriers, these calls may still be interworked with ISUP at some point outside 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](mailto:grant.spellmeyer@uscellular.com)

Sincerely,

A handwritten signature in black ink, appearing to read "Michael S. Irizarry", with a stylized flourish at the end.

Michael S. Irizarry  
Executive Vice President & CTO

CC: [Deborah.Salons@fcc.gov](mailto:Deborah.Salons@fcc.gov)