

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

CONSUMER AND GOVERNMENTAL
AFFAIRS BUREAU SEEKS TO REFRESH
THE RECORD ON ADVANCED
METHODS TO TARGET AND
ELIMINATE UNLAWFUL ROBOCALLS

WC Docket No. 17-59
DA 18-842

COMMENTS OF TRANSACTION NETWORK SERVICES

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I. INTRODUCTION AND SUMMARY

Transaction Network Services (“TNS”) hereby submits the following comments in response to the Federal Communication Commission’s (“FCC” or “Commission”) Public Notice: *CONSUMER AND GOVERNMENTAL AFFAIRS BUREAU SEEKS TO REFRESH THE RECORD ON ADVANCED METHODS TO TARGET AND ELIMINATE UNLAWFUL ROBOCALLS* regarding the Commission’s stated desire to refresh the record on how the Commission might further empower voice service providers to block illegal calls before they reach American consumers.

TNS thanks the FCC for the opportunity to comment on (1) methods providers can use to identify illegal calls; (2) the prevention of illegal calls from reaching consumers; (3) refreshing the record on industry traceback efforts; (4) the reduction of and addressing of false positives when they occur; (5) the potential application of white lists to support efforts to avoid blocking lawful calls.

II. BACKGROUND

TNS' Telecommunication Services Division addresses the full needs of over 400 wireless and wireline operators in the US and globally. From small rural operators in the US to the largest multi-national telecommunication providers around the globe, our portfolio of mobile network, identity, discovery and routing solutions enables the successful and reliable delivery of subscriber solutions, while our clearing, settlement and anti-fraud solutions enables the successful delivery of subscriber services anywhere at any time.

Through TNS Call Guardian ("Call Guardian"), whose users include Sprint, US Cellular, and Verizon Wireless and Verizon wireline, among others, TNS provides a lightweight and flexible solution to identify and filter unwanted robocalls via real-time telephone number reputation analysis. Call Guardian is available for both TDM/SS7 and VoIP, supporting several access protocols, and offers our partners the most accurate and timely detection of robocallers in the market through real-time analysis of over 1 billion call events per day.

III. DISCUSSION

A. Identification of Illegal Calls.

TNS applauds the Commission's continued efforts to address malicious and harassing robocalls in order to restore trust in voice calls. We understand the Commission's desire to encourage the blocking of unused, unallocated, and unassigned telephone numbers, but have previously shared our concern that the blocking of these types of telephone numbers risks pushing bad actors to the spoofing of assigned numbers. We believe we may already be seeing this behavior with the uptick in neighbor spoofing at low-level, but high churn volumes. Further, as outlined in the Commission's previous NPRM, CG Docket No. 17-59, STIR/SHAKEN

adoption will also address a segment of the robocall problem which is likely to represent unlawful calls.¹ Full implementation is, however, still some time in the future, and neither effort will eradicate these illegal calls fully. Bad actors may move to the use of legitimately-registered telephone numbers which they will use, then discard. For this reason, finely-tuned real-time analytics is, and will continue to serve as, a key overlay in the determination of the signature of a likely unlawful call.

The Commission asks what criteria indicate that particular calls are illegal or warrant additional scrutiny. Though we are unable to identify illegal calls with absolute certainty, we are able to use our algorithm to determine those which pose the greatest risk to consumers. The Commission asks, "...do large bursts of calls from a particular caller in a short time window, low average call duration, or low call completion ratios generally indicate that calls might be illegal?" TNS does not believe it serves the Commission's interests for us to respond with any specificity to questions about methodology.

Finally, the Commission asks whether providers should take additional steps to corroborate that calls are highly likely to be illegal before blocking. Current implementations focus on labeling calls and letting the end user decide what to block. We understand that this is one of the key questions in the Commission's Public Notice. However, some operators seek more clarity on safe harbor provisions before implementing more aggressive blocking practices. Apart from this comment, TNS defers to our carrier partners with respect to any questions about whether and which additional steps may be appropriate before service providers consider blocking a call.

¹ *Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No. 17-59, Notice of Proposed Rulemaking and Notice of Inquiry, 32 FCC Rcd 2306, 2331-34 (statements of Chairman Pai and Commissioner Clyburn) (rel. Mar. 23, 2017) (*2017 Call Blocking NPRM and NOI*).

B. Prevention of Illegal Calls from Reaching Consumers.

Please refer to Section A, paragraph 3. TNS defers to our carrier partners with respect to the blocking of calls, but encourages the Commission to consider whether it feels it has adequately addressed safe harbor provisions with respect to blocking.

To the Commission's question about whether providers may block or label calls, as well as its question about what is done based on call analysis today, TNS can share the following: our carrier partners currently warn consumers, providing context, and put the choice about whether to answer those calls in the consumers' hands. Today, roughly 91% of the negatively-scored telephone numbers TNS has in its Call Guardian system are categorized as nuisance versus high-risk telephone numbers, but the high-risk numbers generate nearly half of the negative robocall volume. This mix dictates an approach that supports both labeling and consumer driven blocking. Further, TNS supplies our carrier partners with the tools to allow our partners' customers to provide feedback via simple interface on the mobile device or via public websites, which TNS then evaluates and factors into its scoring algorithm, as appropriate.

The Commission has also asked about tracebacks in this section. TNS and our partners are actively engaged in discussions about traceback efforts and expect to see this area continue to evolve rapidly. In support of these efforts, TNS is currently working with our partners to pass the "verstat" TEL URI parameter to signal verification to SIP clients.

C. Refreshing the Record on Industry Traceback Efforts.

TNS appreciates the role US Telecom has played in organizing and facilitating the Industry Traceback Working Group (ITB Group) in order to align industry bodies on traceback efforts.

TNS also appreciates the role ATIS has played with respect to the updating and maintenance of the Service Provider Contact Directory (SPCD). “The SPCD, available upon request across the industry ecosystem (e.g., service providers, regulators and enforcement bureaus) to provide contact information for reporting or passing along trouble reports to interconnecting companies, has been expanded to include contacts related to traceback and for subpoena requests. As more providers submit their contact information for the SPCD, traceback efforts can be investigated in a more expeditious manner.”²

With respect to any role the FCC may play, TNS acknowledges the important role the FCC’s Enforcement Bureau has played and will continue to play in receiving handoffs from the ITB Group and others seeking repercussions.

More generally, it is our belief that the industry is making good progress on this issue and that participation will improve as defined processes continue to emerge from current working group discussions.

D. The Reduction and Addressing of False Positives When They Occur.

As mentioned above, ~91% of the negatively-scored telephone numbers within the Call Guardian analytics platform are scored as potential nuisance versus potential high risk/illegal/likely scam. TNS has learned over the course of our years of involvement in the robocall question that false positives are often subjective. In the past year, as enterprises have sought a deeper understanding of the course the tagging and blocking of calls is taking, this has emerged as one of the philosophical underpinnings in addressing robocalls. The characterization of nuisance calls and their handling is not the empirical issue that the characterization of scam calls represents.

² *Industry Robocall Strike Force Report*, April 28, 2017.
<https://www.fcc.gov/files/industryrobocallstrikeforcereportpdf>

The questions that have emerged include: 1) How do we as an industry address the necessary tension between the desire to ensure that voice subscribers are not interrupted by unwanted calls with the needs of legitimate enterprises who rely on outbound calls as central to their business model? 2) Is this an analogue to email spam and, if so, what are best practices we can leverage? 3) How may we create tools for enterprises to allow them to continue to conduct business with greater insight into best calling practices?

In response to these questions: 1) It is our strong sense that our provider partners bear both the consumer and the needs of legitimate enterprises in mind in every decision they make. They have chosen to partner with us because we share this philosophy and provide them with the data to support this decision-making; 2) We have incorporated email anti-spam practices and other analogous models to develop the best machine-learning algorithms available in the industry; 3) TNS has developed a tool to provide vetted enterprises better insights into the characterization of the telephone numbers those enterprises use for outbound calling. Because TNS, as a signaling and routing hub central to voice and data calls, sees over one billion call events per day, users of this tool understand that we are seeing more information than that coming in to our Call Guardian customers. By offering this view into our analytics to call originators for their telephone numbers, it is TNS' intent to ensure that enterprises are not obliged to share their telephone numbers and other related information with multiple platforms in order to receive the insights needed to conform to best practices in this new robocall tagging and blocking landscape.

In some cases, however, true false positives will arise. To address this, TNS has, since its inception several years ago, offered a robust dispute resolution process. We have also aided our partners in creating publicly available feedback mechanisms. TNS continues to refine and

automate aspects of the dispute resolution process both as bad actor tactics evolve and as enterprises further engage with us. TNS provides this as a service to our partners and treats these disputes as high priority.

E. The Potential Application of White Lists to Support Efforts to Avoid Blocking Lawful Calls.

Apart from the careful application of white listing of emergency telephone numbers, TNS would advise extreme caution in the application of white lists. Whether white listing of certain other telephone numbers may make more sense once STIR/SHAKEN is fully deployed is a question for the future. As things stand today, telephone numbers on a white list are an invitation for spoofers. Static lists of general lawful callers are not a viable model as we explore methods to avoid the blocking of lawful calls.

IV. CONCLUSION

In summary, service providers have analytics tools available to them that can provide severity and risk level of incoming calls that allow them to customize call protection capabilities for their end users. STIR/SHAKEN will contribute to a greater sense of certainty regarding the authenticity of calls which will begin to restore trust to voice calling. Regarding tracebacks, TNS is working with our partners, and applauds the work done to date by the USTA, ATIS, and the FCC's Enforcement Bureau. With respect to false positives, though scam/fraud is an empirical determination, there is sufficient grey area regarding the perception of nuisance calls that any determinations as to whether the characterizations of those calls are false positives or not is a matter of perspective, which often differs when viewed from the viewpoint of consumers versus that of call originators. TNS defers to our carrier partners where the characterization of nuisance calls is concerned. TNS' and our partners' priority is accuracy. For this reason, TNS provides our

partners with tools for the general public including enterprise, and for our partners' subscribers, to dispute characterization of a call's nuisance or fraud risk. Finally, TNS would strongly advise the Commission to set aside white listing as a methodology, except in very narrow cases where emergency numbers are used, as white lists are prime spoofing targets, and are not a reliable or scalable methodology.

TNS thanks the Commission for the opportunity to share our feedback and for its ongoing efforts to restore trust in voice calling.