Numeracle

August 1, 2019

Via Electronic Filing

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

Re: Notice of Ex-Parte Communication, CG Docket No. 17-59, WC Docket No. 17-97

Dear Ms. Dortch:

On July 30, 2019, Rebekah Johnson, CEO of Numeracle, Inc.; Doug Ranalli, founder and vice president of products and strategy at NetNumber, Inc.; and Eric Golin, chief architectural officer at Everbridge Inc., met with Mark Stone, Kurt Schroeder, Jerusha Burnett, and Karen Schroeder of the Consumer and Governmental Affairs Bureau; and Kristi Thornton from the Enforcement Bureau. The purpose of the meeting was to discuss a proposed requirement for companies seeking a safe harbor to use vetted caller information to improve accuracy, the shortcomings of SHAKEN/STIR for identification of calling parties in complex call-origination use cases, and to provide further insight in critical call infrastructure and the impact of analytics and SHAKEN/STIR to delivery of these communications provided by Everbridge.

Numeracle is the pioneer of call blocking and labeling visibility and control in the new calling ecosystem, providing actionable strategies for businesses whose legal calls have been improperly blocked or labeled as illegal robocalls. By working with major carriers, analytics companies, app developers, device manufacturers, and industry leaders, Numeracle delivers a path to call labeling control for legal call originators, including critical safety and healthcare callers as well as legal calls from utilities, financial companies, government entities, and TCPA-compliant calls from other callers.

NetNumber, Inc. brings nearly 20 years of experience delivering core network signaling technology that powers global telecom and enterprise networks. Its software-based signaling-control solutions accelerate delivery of new services like Private LTE and IoT/M2M solutions across multi-gen networks, dramatically simplifying the network core and reducing operating expenditures. These solutions span a range of network types from 2G-3G-4G-5G to future G delivered on the industry's first All-G signaling platform called TITAN. In addition, NetNumber Data Services are essential for global inter-carrier routing, roaming, voice and messaging. Data powers fraud detection and prevention solutions and enables enterprise B2B and B2C communications platforms. NetNumber multi-protocol signaling firewall, fraud-detection, and robocalling solutions secure networks against current/emerging threats.

Everbridge was formed following 9/11 – inspired by the tragic events to build a system that would improve communication in a crisis and potentially save many lives. During public safety threats such as active shooter situations, terrorist attacks or severe weather conditions, Everbridge's over 4,500 global customers rely on its Critical Event Management Platform to quickly and reliably aggregate and assess threat data, locate people at risk and responders able to assist, and automate the execution of pre-defined communications processes through the secure delivery to over 100 different communication devices. Everbridge's platform sent over 2.8 billion messages in 2018 and offers the ability to reach over 500 million people in more than 200 countries and territories. The company's customers include the states of New York, Florida, and Connecticut, the National Capital Region (Washington D.C. and neighboring counties in Maryland and Virginia), 9 of the 10 largest U.S. cities, 46 of the 50 busiest North American airports, 9 of the 10 largest U.S.-based health care providers, and thousands of police and public safety departments.

Need for Vetted Entity Numbers as required for "Reasonable Analytics"

We proposed that if the FCC were to agree with carriers to expand the proposed safe harbor beyond just blocking based on SHAKEN/STIR, that to obtain a safe harbor, carriers and their analytics partners must use reasonable analytics, which would include protections and redress for critical and legal calls through a solution such as Numeracle's. Numeracle's certified entity number registry contains numbers from vetted legal entities spanning critical communications, safety services, healthcare, utilities, and financial institutions. Numeracle has provided examples of errors by major carriers and their analytics partners demonstrating that the analytics alone do not provide the accuracy necessary to justify a safe harbor.[1] The refusal to accept and process data from Numeracle or other registries who verify and monitor legal entity status demonstrates the analytics alone are presumptively not reasonable.

Numeracle's Trusted Entity™ and phone number data is being deployed onto NetNumber's Global Data Services platform as the Trusted Entity Registry to identify callers in support of industry-wide efforts around SHAKEN/STIR and default call blocking objectives. This registry is available to carriers and their analytics partners at no cost in order to protect not only critical but all legal voice calls. In support of the FCC's efforts to protect critical calls, we strongly believe this partnership and solution should be utilized by all carriers to improve the accuracy of their analytics and to ensure that legal, wanted calls are not erroneously blocked or labeled, which is currently all too commonplace.

Need for Calling Party Identification in Enterprise & Critical Call Origination Scenarios

NetNumber provided further details into the shortcomings of the base SHAKEN/STIR signing and attestation of numbers as the protocol does not identify the entity behind the call in the vast majority of legal entity ("Calling Party") outbound communications. A common complex call-origination configuration for Calling Parties such as hospitals, state governments, retailers and banks is the use of a Vendor to manage and create efficiencies for consumer communications. In the diagram below, a Calling Party could be a state government that has contracted with a Vendor such as Everbridge, Inc. to provide statewide emergency alert and notifications to residents, businesses, and visitors. For cost, failover, redundancy, and reliability reasons, the Vendor will often use an Infrastructure partner to deliver the

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[1] *See* Ex Parte Letter from Rebekah Johnson, CEO, Numeracle, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, at 2-4 (May 24, 2019), *available at* https://ecfsapi.fcc.gov/file/105242294603296/Numeracle%20Ex%20Parte.pdf

calls onto the network. Examples of Infrastructure partners include Twilio and Fonative. The Infrastructure provider will use multiple carriers to deliver the calls across the network. As currently defined, SHAKEN/STIR will not provide caller authentication for calls delivered through this common configuration. The attestation is not what makes the SHAKEN/STIR signing useful to identify illegal calls. The vetted Calling Party identity is the missing component in SHAKEN/STIR so that call recipients know the identity of the caller, not just that the originating carrier claims that the caller has the right to use the telephone number signaled in the call.
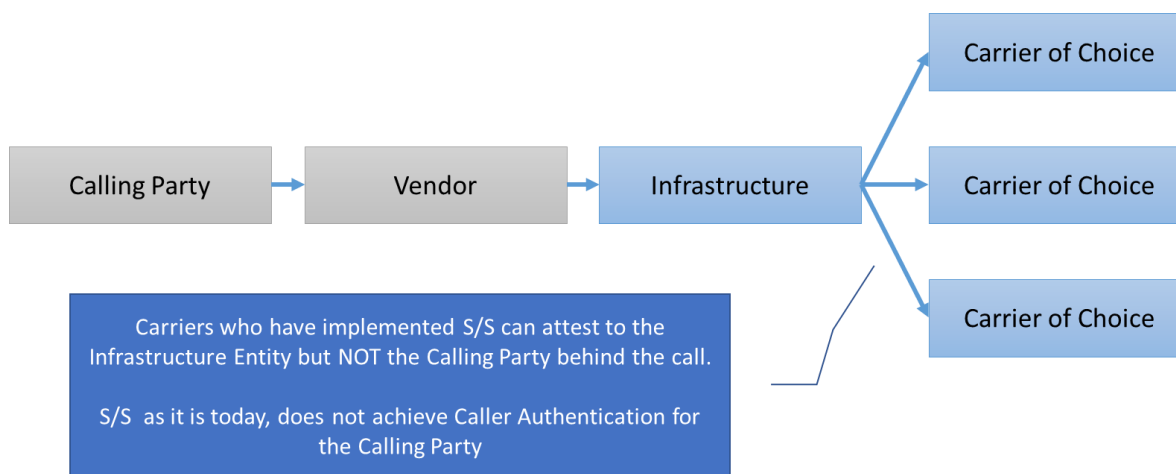
NetNumber presented the proposed concept of Delegated Certificates[2] with the ATIS/SIP Forum IP-NNI Task Force as a viable solution to achieve the FCC's intended purpose for authentication of callers in complex call-origination scenarios. We noted that illegal actors, those the FCC is targeting, often utilize the same configuration as legal callers and those of entities making critical calls. The vetted identification of a calling party associated with SHAKEN/STIR, will support not only originating and terminating carriers, but also infrastructure providers in being able to use a vetting services such as Numeracle's, to identify Calling Parties. In doing so, the voice calling ecosystem moves a step closer to assuring the confirmed and authenticated identity of all callers, and also accelerating traceback and enforcement by exposing the bad actors detected as fraudulent through the assistance of the analytics entities.

Carriers Should be Required to Deliver Critical Calls

Everbridge defines critical calls made by their customers as those related to life, safety and business continuity. Proposed processes for blocking unvetted calls could have the unanticipated consequence of blocking or delaying communications from state, city and county emergency management agencies, airports and hospitals, and police departments, thereby potentially resulting in harm to the public and delay in first responders taking action to address a critical event.

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[2] See, e.g., ATIS/SIP Forum IP-NNI Task Force, Signature-Based Handling of Asserted Information Using Tokens (SHAKEN): Delegate Certificates ATIS Technical Report (2019), http://access.atis.org/apps/group_public/document.php?document_id=47129&wg_abbrev=ipnni;

While the vast majority of communications delivered through Everbridge's platform are critical calls as defined above, the same calling parties will deliver less urgent communications across the same numbers. Due to the dynamic use of numbers, a standalone registry for a critical number list is not the long-term solution for the protection of calls whether critical or not. Even with a critical number list, the carriers' analytics are not currently required to consider this data point to prevent improper labeling and blocking. Consumers need FCC intervention to require carriers to make use of critical number data available to them today.

Providing the list of numbers in a real-time environment to the carriers through a vetting entity like Numeracle and making it accessible through a provider like NetNumber is an interim solution to combat mislabeling and improper blocking by the carriers of critical calls. The long-term solution for the protection of critical and non-critical calls will be to require carriers to implement SHAKEN/STIR and for that standard to include an enhanced attestation and verification with vetted Calling Party identity information.

While we fully support the deployment of SHAKEN/STIR by voice service providers and use of analytics, we note the shortcomings of each to protect critical and wanted communications. SHAKEN/STIR was designed to provide consistent traceback to determine the originating carrier, but SHAKEN/STIR does not determine nor currently provide for the identification of a vetted calling party. The need for analytics will remain after SHAKEN/STIR is implemented, creating even greater urgency to require carriers to include vetted entity numbers to bring reasonableness and accuracy to the analytics used to determine intent and calling party.

Respectfully submitted,

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